MHC-3750

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

- MHC-3750 is composed of following models. As for the service manual, it is issured for each component model, then, please refer to it.

COMPONENT MODEL NAME FOR MHC-3750

AMPLIFIER, CASSETTE DECK	DXA-H3750
CD PLAYER	CDP-H3750
TUNER	ST-H3750
SPEAKER SYSTEM	SS-H3750

Note :
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Note :
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SPECIFICATIONS

Power requirements
AEP, IT model:
220 V — 230 V AC, 50/60 Hz
UK model:
240 V AC, 50 Hz
US, Canadian model:
120 V AC, 60 Hz

Power consumption
AEP, IT model: 125 watts
UK model: 270 watts
US model: 120 watts
Canadian model: 130 watts

Dimensions
Approx. 225 × 365 × 310 mm (w/h/d)
($8^{7}/_{8} \times 14^{3}/_{8} \times 12^{1}/_{4}$ in.) incl. projecting parts and controls

Weight
Approx. 11.7 kg (25 lb 13 oz)

Supplied accessories
Remote Commander (1)
(US, Canadian model: RM-S375)
(AEP, UK, IT model: RM-S375X)
Sony SUM-3 (NS) batteries (2)
AM loop antenna (1)
FM antenna (1)
AC power cord (1)
Flat cord (2)
Speaker cord (2)
(US, Canadian model)

Design and specifications subject to change without notice.

- IT: Italian model

PARTS LIST

NOTE:

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-501-369-11	ANTENNA (AEP, UK, IT)	
	1-501-374-11	ANTENNA, LOOP	
⚠	1-558-032-11	CORD, POWER (UK)	
	1-574-927-21	CORD (WITH CONNECTOR) (DXA-ST)	
⚠	1-575-131-11	CORD, POWER (AEP, UK, IT)	
⚠	1-575-706-11	CORD, POWER (US, Canadian)	
	1-590-855-11	CORD, SPEAKER (US, Canadian)	
	1-693-168-11	REMOTE COMMANDER (RM-S375) (US, Canadian)	
	1-693-169-11	REMOTE COMMANDER (RM-S375X) (AEP, UK, IT)	
	1-696-412-11	CORD (WITH CONNECTOR) (DXA-CDP)	
	3-694-922-01	SHEET, PROTECTION (SS)	
	3-755-705-11	MANUAL, INSTRUCTION (US, Canadian, AEP, UK) (ENGLISH, FRENCH, SPANISH, DUTCH)	
	3-755-705-41	MANUAL, INSTRUCTION (AEP, IT) (GERMAN, ITALIAN, SWEDISH, PROTUGUESE)	
*	4-945-080-01	CUSHION (SS)	
*	4-953-551-01	CUSHION (R) (ST)	
*	4-953-633-01	CUSHION (L) (ST)	
*	4-953-667-01	CUSHION (R) (CDP)	
*	4-953-668-01	CUSHION (L) (CDP)	
*	4-953-669-01	CUSHION (R) (DXA)	
*	4-953-670-01	CUSHION (L) (DXA)	
*	4-954-958-01	INDIVIDUAL CARTON (AEP, UK) (CDP, DXA, ST)	
*	4-954-959-01	INDIVIDUAL CARTON (AEP, IT) (DXA)	
*	4-954-960-01	INDIVIDUAL CARTON (AEP, IT) (CDP, ST)	
*	4-954-961-01	INDIVIDUAL CARTON (US, Canadian) (CDP, DXA, SS, ST)	
	9-831-267-23	WIRE KIT (US, Canadian)	
	9-910-999-33	INSTRUCTION (US)	

MINI Hi-Fi COMPONENT SYSTEM

SONY®

9-957-396-11

Sony Corporation
Audio Group

English
92H0493-1
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DXA-H3750

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model

This set is the Amplifier, cassette deck section in MHC-3750.

Model Name Using Similar Mechanism		TC-H2700/H3700
Tape Transport Mechanism Type	DECK A	TCM-190RA13A
	DECK B	TCM-190RB22A

SPECIFICATIONS

Amplifier Section

Continuous RMS power output
- US, Canadian model
  - For satellite speaker:
    - 23 + 23 watts (8 ohms at 250 Hz — 20 kHz, 1% THD)
    - 28 + 28 watts (8 ohms at 1 kHz, 5% THD)
  - For bass speaker:
    - 27 + 27 watts (6 ohms at 80 — 250 Hz, 1% THD)
    - 32 + 32 watts (6 ohms at 110 Hz, 5% THD)
- AEP, UK, Italian model
  - For satellite speaker:
    - 23 + 23 watts (8 ohms at 1 kHz, DIN)
    - 28 + 28 watts (8 ohms at 1 kHz, 5% THD)
  - For bass speaker:
    - 27 + 27 watts (6 ohms at 110 Hz, DIN)
    - 32 + 32 watts (6 ohms at 110 Hz, 5% THD)

Music power output (AEP, UK, Italian model)
- For satellite speaker:
  - 45 + 45 watts (8 ohms at 1 kHz, 10% THD)
- For bass speaker:
  - 50 + 50 watts (6 ohms at 110 Hz, 10% THD)

Inputs
- DAT IN (phono jacks): sensitivity 450 mV impedance 47 kilohms
- AEP, UK, Italian model
- PHONO IN (phono jacks); sensitivity 5 mV impedance 47 kilohms
- US, Canadian model
- VIDEO IN (phono jacks): sensitivity 450 mV impedance 47 kilohms

Outputs
- HEADPHONES (stereo minijack): accepts headphones of 8 ohms or more
- SPEAKER (SATELLITE): accepts speakers of 8 to 16 ohms
- SPEAKER (BASS): accepts speakers of 6 to 16 ohms

Cassette Deck Section

Recording system: 4-track 2-channel stereo

Frequency response (DOLBY NR OFF)
- 40 — 13,000 Hz (±3 dB), using TYPE I cassette (Sony HF-S)
- 40 — 14,000 Hz (±3 dB), using TYPE II cassette
- 40 — 15,000 Hz (±3 dB), using TYPE IV cassette

Wow and flutter: 0.1% WRMS ±0.3% (DIN)

Design and specifications subject to change without notice.

STEREO CASSETTE DECK AMPLIFIER

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

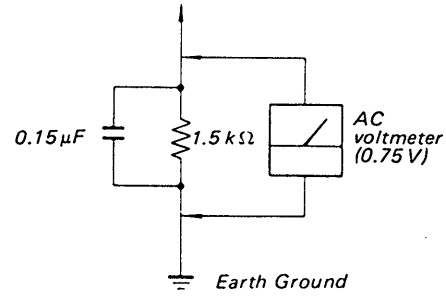
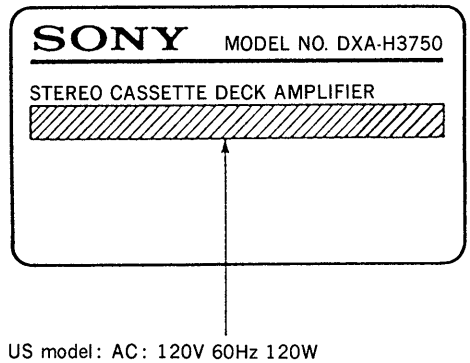


Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

— Model Number Label —



US model: AC: 120V 60Hz 120W
CND model: AC: 120V 60Hz 130W
AEP, IT model: AC: 220−230V~50/60Hz 125W
UK model: AC: 240V~50Hz 270W

- CND: Canadian model
- IT: Italian model

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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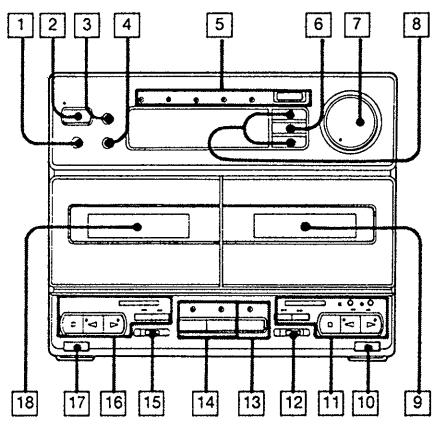
SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATIONS

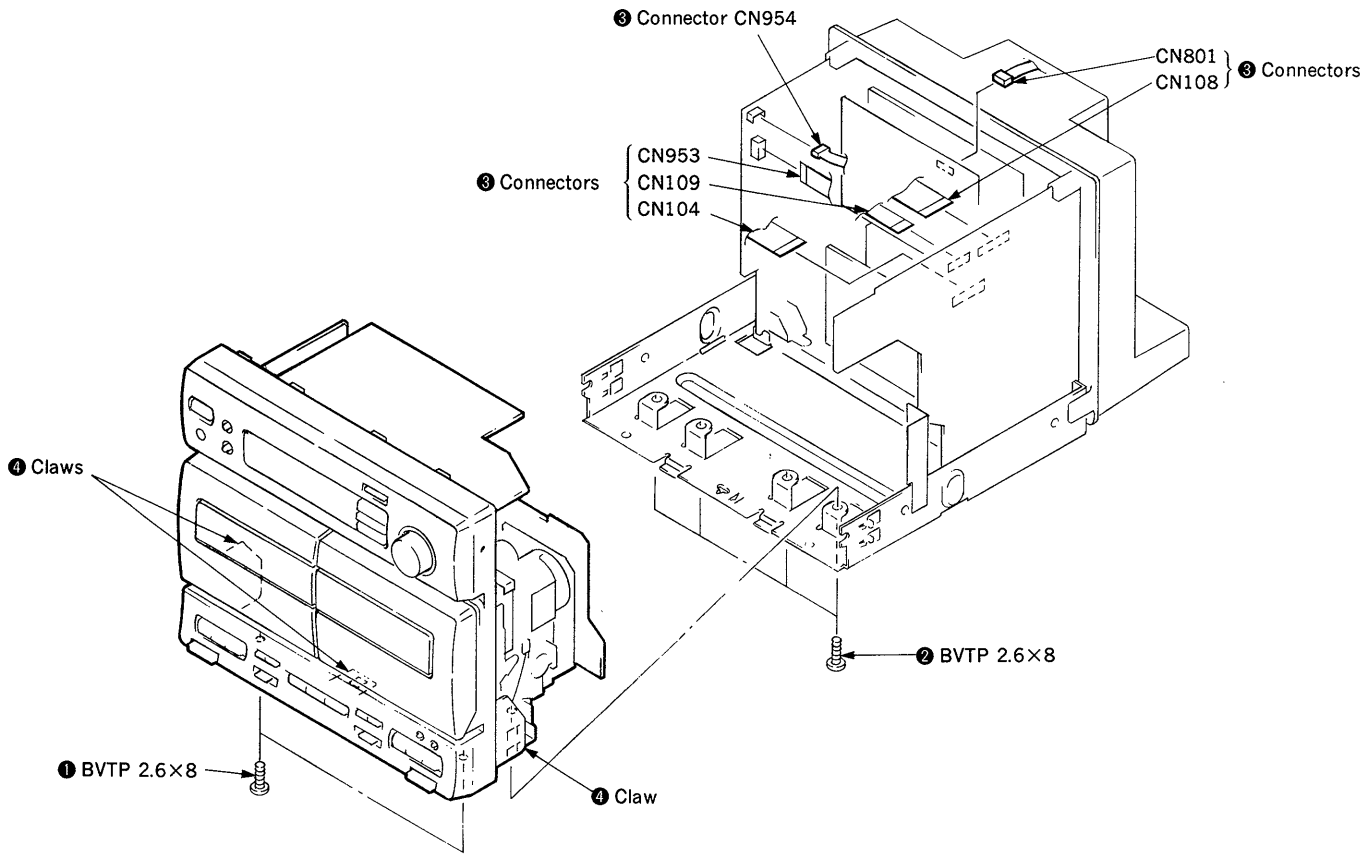
[1] HEADPHONES jack (stereo minijack)
[2] SYSTEM POWER switch and STANDBY indicator
The indicator remains lit as long as the AC power cord is connected to a wall outlet.
[3] DISPLAY button ⑯
[4] DIRECT button and indicator ⑯
[5] FUNCTION button and function indicators ⑳ ㉚
[6] PRESET button ⑯
[7] VOLUME control ㉖
[8] TOTAL EFFECT CONTROL –/+ buttons ㊽
[9] Cassette holder (Deck B)
[10] EJECT ⏏ button (Deck B)
[11] Tape operation buttons (for Deck B)
□: Stop button
▷: Forward play button and indicator
◁: Reverse play button and indicator
◀◀ ▶▶: Fast winding buttons
PAUSE ❚❚ button and indicator
REC ● button and indicator
[12] DOLBY NR (Dolby Noise Reduction) switch ㊵
[13] CD SYNCHRO button ㉚ ㊻
[14] TAPE DUBBING buttons ㉞
NORMAL SPEED button
HIGH SPEED button
[15] DIRECTION mode selector ㊵ ㊹
[16] Tape operation buttons (for Deck A)
□: Stop button
▷: Forward play button and indicator
◁: Reverse play button and indicator
◀◀ ▶▶: Fast winding buttons
[17] EJECT ⏏ button (Deck A)
[18] Cassette holder (Deck A)



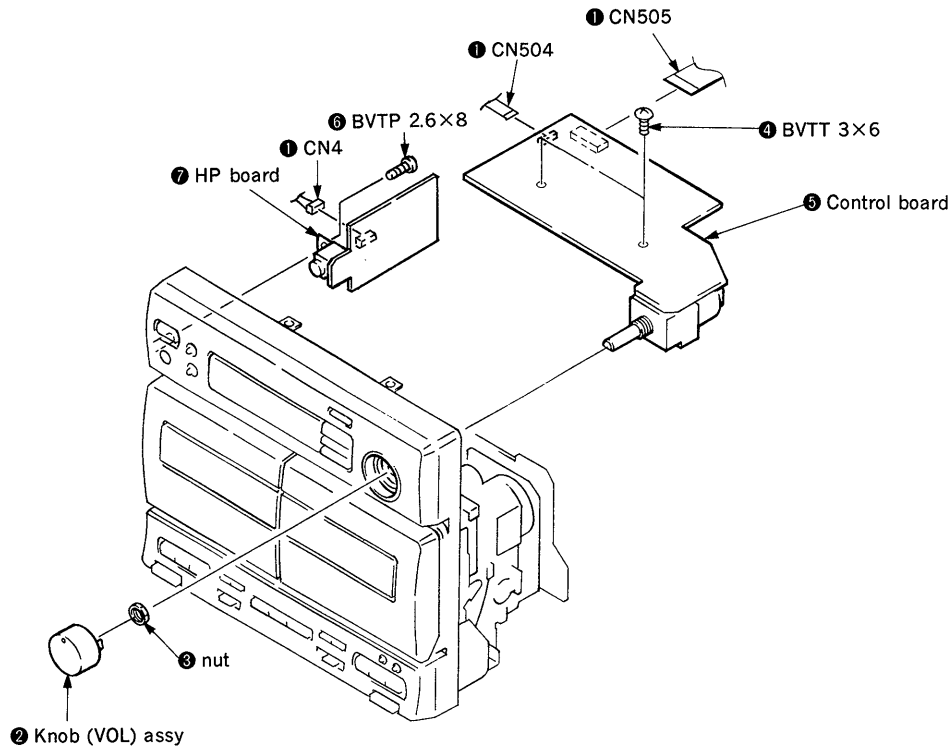
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

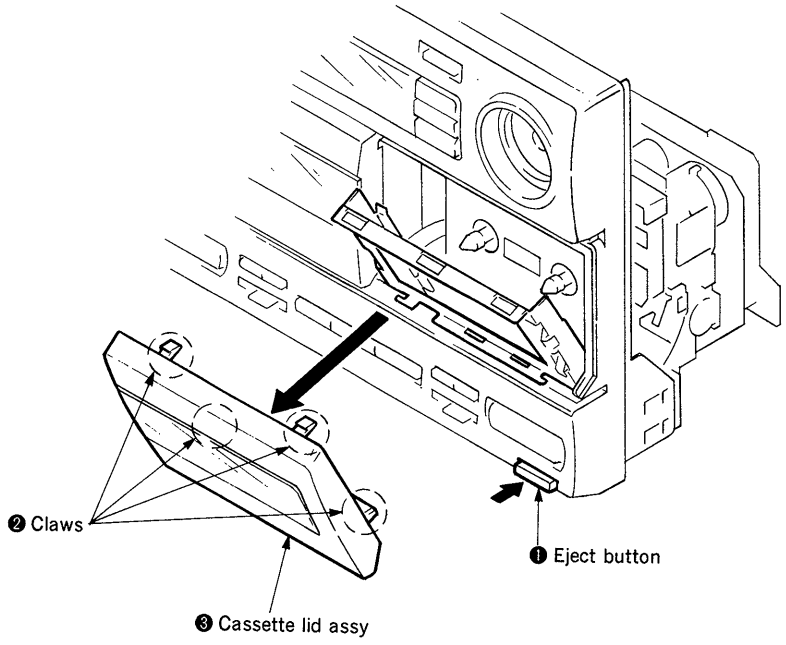
2-1. FRONT PANEL



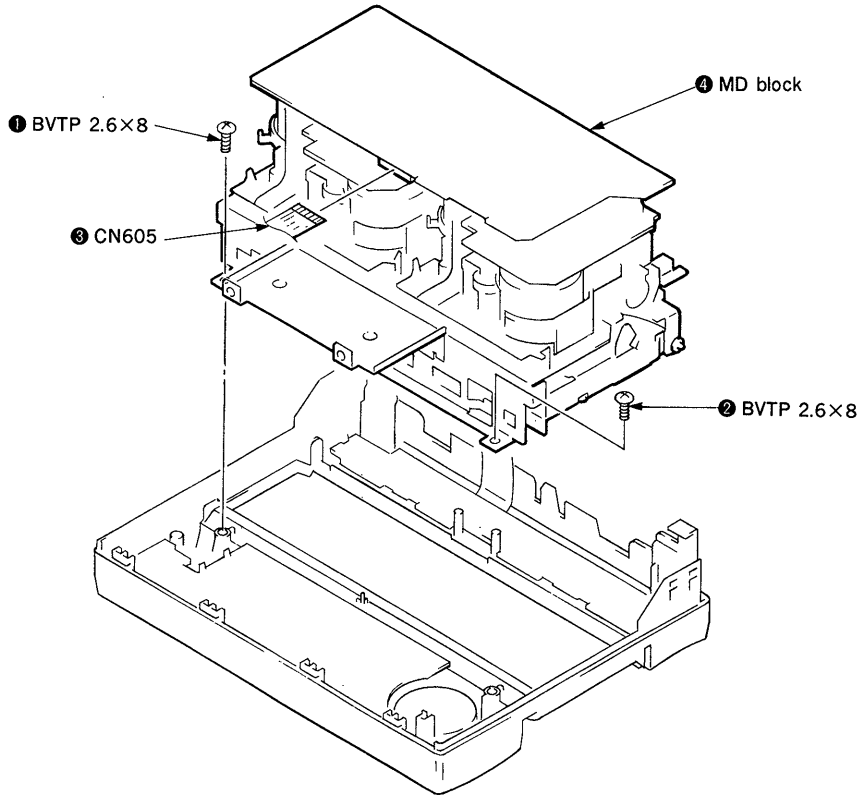
2-2. CONTROL BOARD, HP BOARD



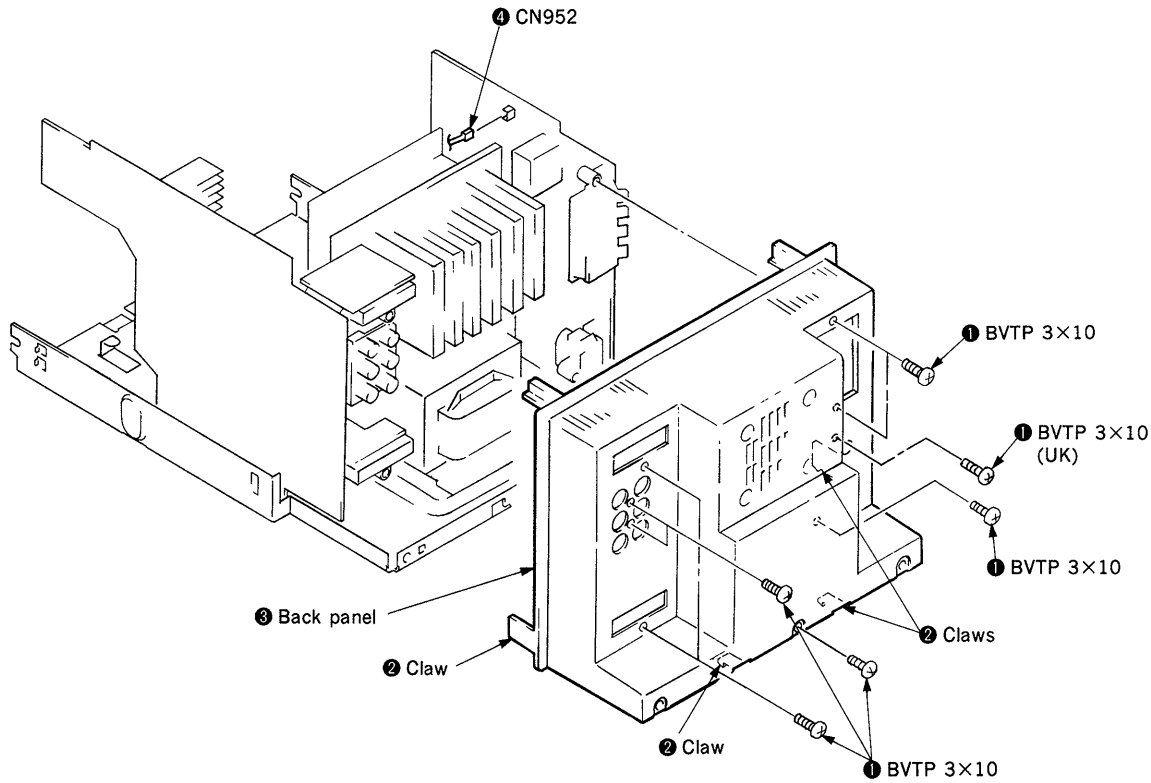
2-3. CASSETTE LID ASSY



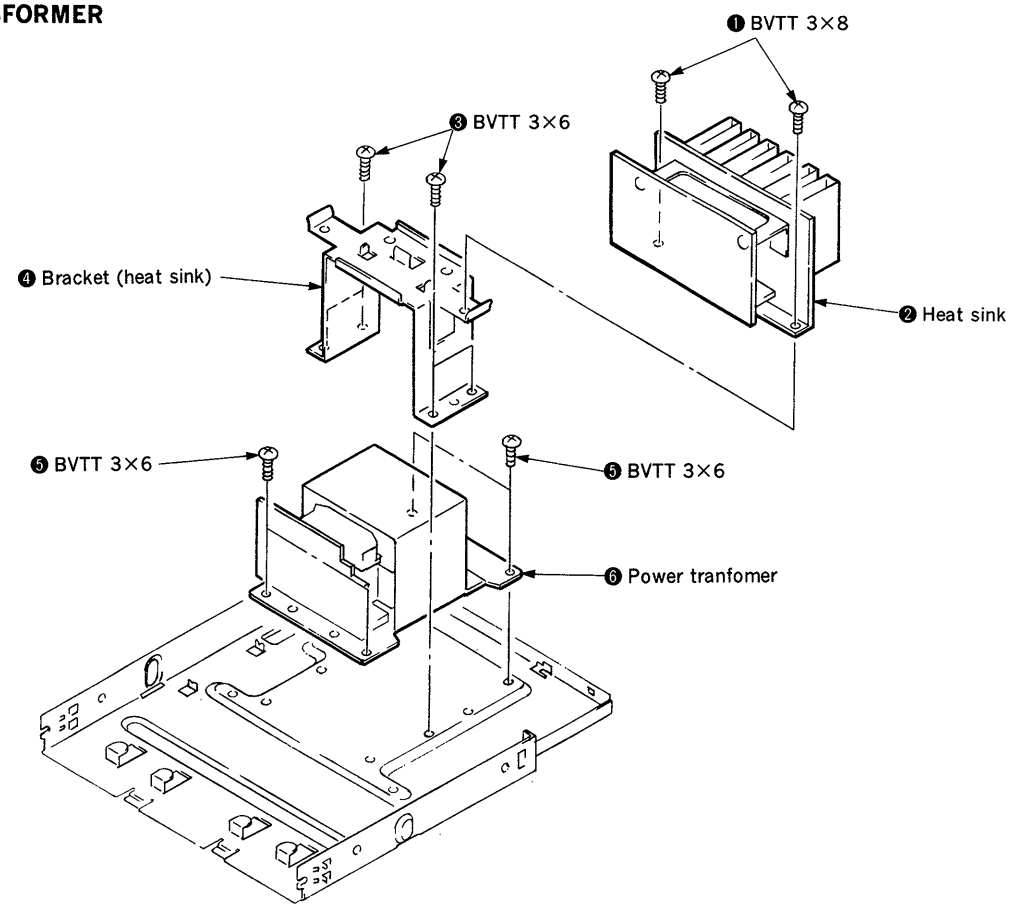
2-4. MD BLOCK



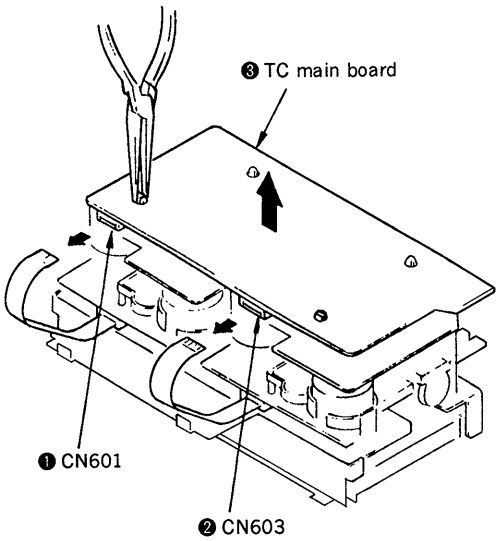
2-5. BACK PANEL



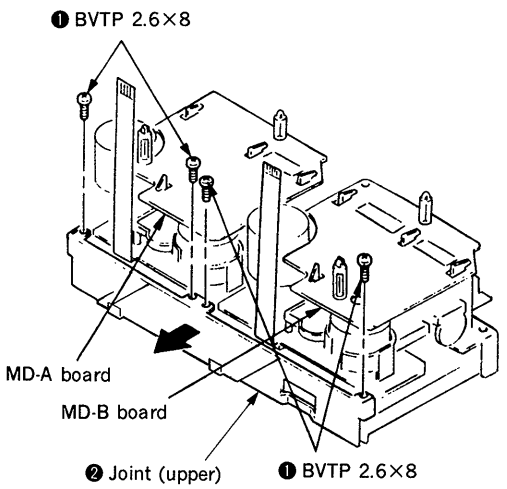
2-6. POWER TRANSFORMER



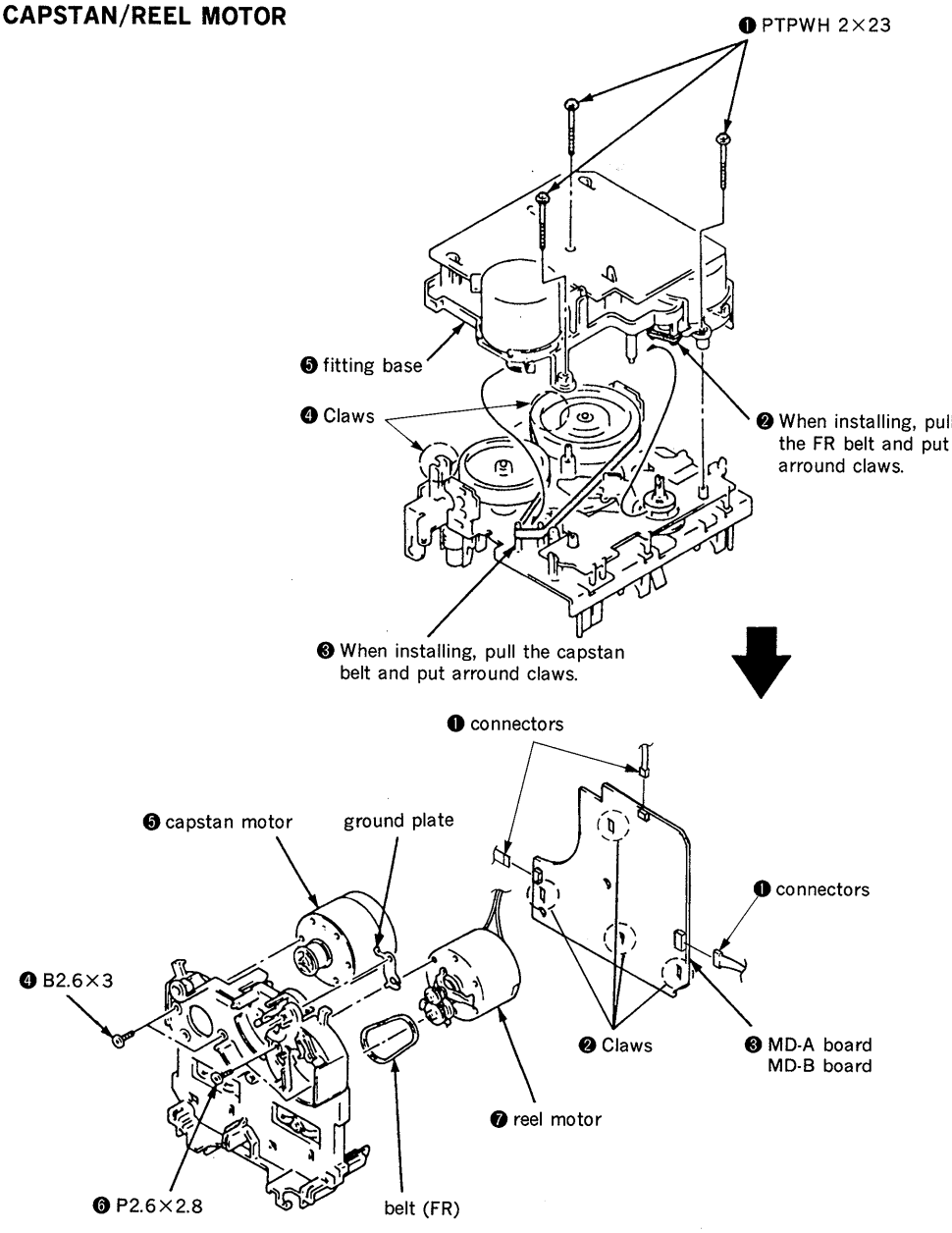
2-7. TC MAIN BOARD



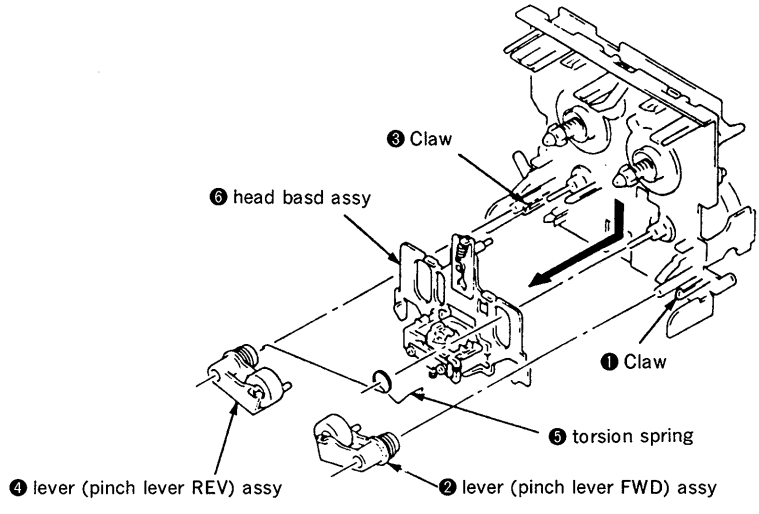
2-8. JOINT (UPPER)



2-9. CAPSTAN/REEL MOTOR



2-10. HEAD BASE ASSY



SECTION 3
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured alcoholmoistened swad :
   record/playback head　　pinch roller
   erase head　　rubber belts
   capstan　　idlers
2. Demagnetize the record/playback head with a head demagnetizer.
   (Head demagnetizer do not approach for the erase head.)
3. Do not use a magnetized screwdriver for the adjustment.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be perfomed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
Forward	CQ-102C	30 to 65g • cm (0.42 to 0.90 oz • inch)
Forward back tension	CQ-102C	1 to 6g • cm (0.014 to 0.08oz • inch)
Reverse	CQ-102RC	30 to 65g • cm (0.42 to 0.90oz • inch)
Reverse back tension	CQ-102RC	1 to 6g • cm (0.014 to 0.08oz • inch)
Forward, Reverse	CQ-201B	70 to 120g • cm (0.98 to 1.67 oz • inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustment and measurement should be performed for both L-CH and R-CH.
   • Switch position
   DOLBY NR switch : OFF
3. Perior to electrical adjustments, short the connector TP401 (test mode).

Test Tape

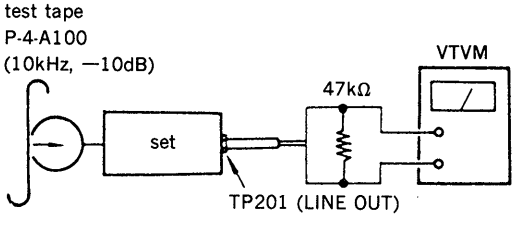
Tape	Contents	Use
P-4-A100	10kHz, −10dB	Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment

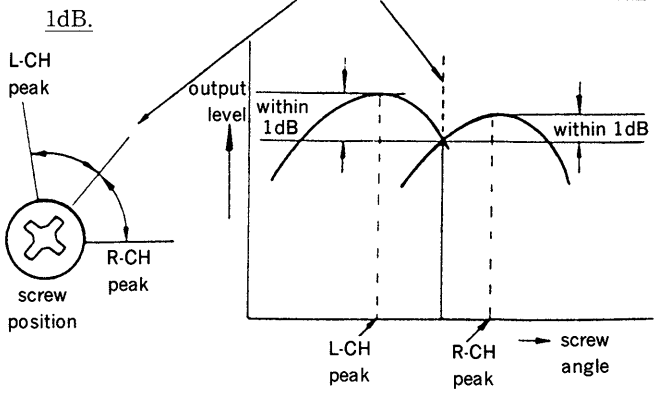
DECK A **DECK B**

Procedure :

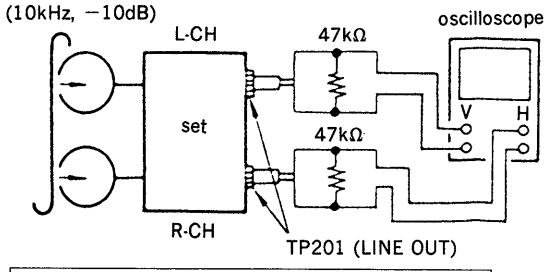
1. Forward Playback Mode

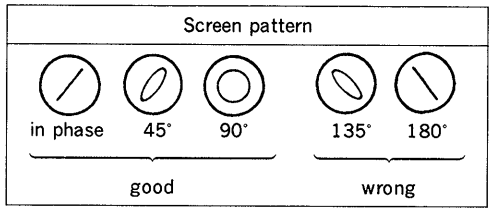


2. Turn the adjustment screw for the maximum output levels. If these levels do notmatch, turn the adjustment screw until both of output levels match together within 1dB.



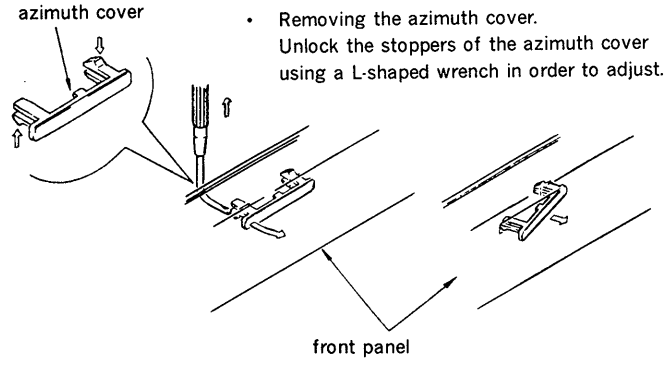
3. Playback Mode

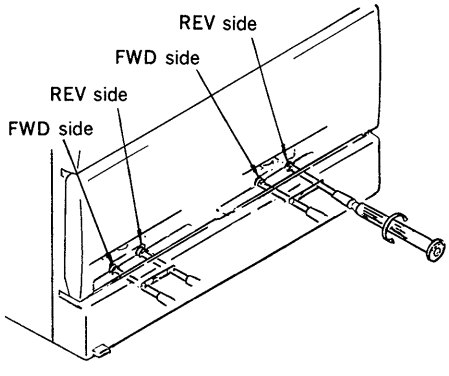




4. Change the reverse playback mode and repeat the steps 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location : —record/playback head—

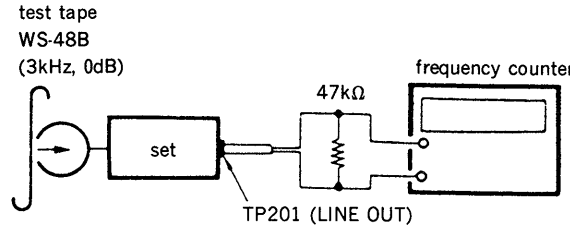

azimuth cover
• Removing the azimuth cover.
Unlock the stoppers of the azimuth cover
using a L-shaped wrench in order to adjust.
front panel



Tape Speed Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—



Perform high speed adjustment before normal speed adjustment.

(High speed adjustment)

1. Turn on the power and put the deck A into the FWD mode.
2. Press the HIGH SPEED switch.
3. Adjust RV72A (H) of the deck A so that a reading on the frequency counter meets the adjustment value.
4. Adjust the RV72B (H) of deck B performing steps 1 to 3 as deck A.

(Normal speed adjustment)

1. Put the set into the FWD playback mode.
2. Press the NORMAL SPEED switch.
3. At this time, adjust RV71A (L) of the deck A and RV71B (L) of the deck B so that a reading on the frequency counter meets the adjustment value.

Adjustment Limits :

Speed	Frequency Counter Reading
High	6,000 ± 20Hz
Normal	3,000 ± 10Hz

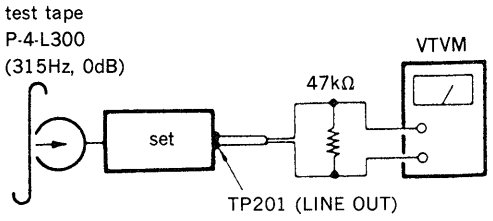
Frequency difference between the beginning and the end of the tape should be within 3%.
Frequency difference between deck A and deck B the beginning of the tape should be within 1.5%.

Adjustment Location : MD-A Board, MD-B Board

Playback Level Adjustment DECK A DECK B

Procedure :

—Forward Playback Mode—



Adjust deck A : RV11A (L-CH), RV21A (R-CH) and deck B : RV11B (L-CH), RV21B (R-CH) so that the VTVM reading becomes the adjustment limits below.

Adjustment Limits :

LINE OUT level : −7.7 ± 0.5dB 0.301 to 0.338V

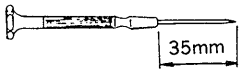
Level Difference between Channels : within 0.5dB

Confirm the LINE OUT level does not change in playback mode while changing the mode from playback to stop several times.

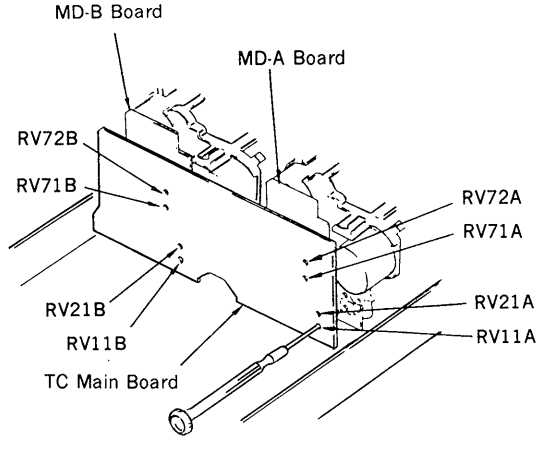
Adjustment Location : MD-A Board, MD-B Board

Tape Speed/playback Level Adjustment

Screwdriver to adjust the MD block



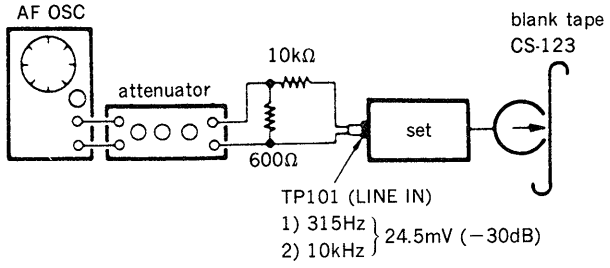
The MD block adjustment can be performed by inserting a screwdriver of which axis length (not including the shaft) is 35 mm or more through the rear side of the main board.



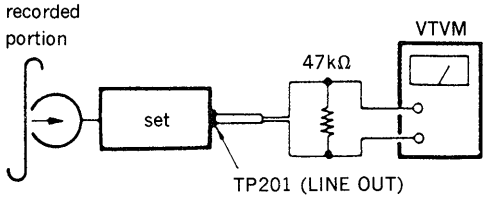
Record Bias Adjustment DECK B

Procedure :

1. Record Mode



2. Playback Mode



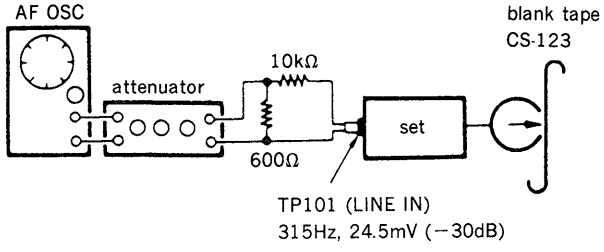
Playback the signal recorded in step 1.
Confirm that the 10kHz playback output is 0 ± 0.5dB (0.732 to 0.821V) relative to the 315Hz output. if necessary. Adjust RV12 (L-CH), RV22 (R-CH) and repeat the steps given above.

Adjustment Location : MD-B Board

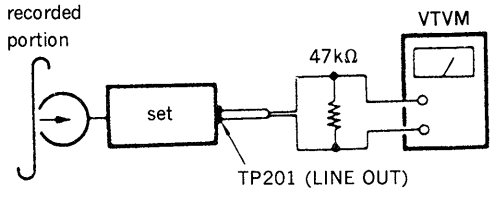
Record Level Adjustment DECK B

Procedure :

1. Record Mode



2. Playback Mode



Confirm playback the tape recorded become adjustment level as follows.
If necessary, adjust RV201 (L-CH), RV301 (R-CH) and repeat steps 1 and 2.

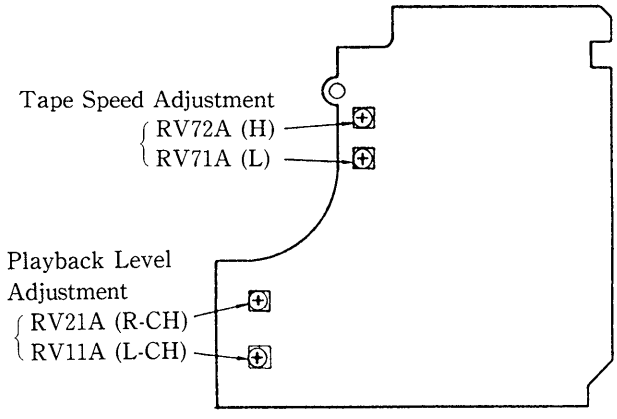
Adjustment Limits :

LINE OUT level : −26 ± 0.5dB (37 to 41mV)

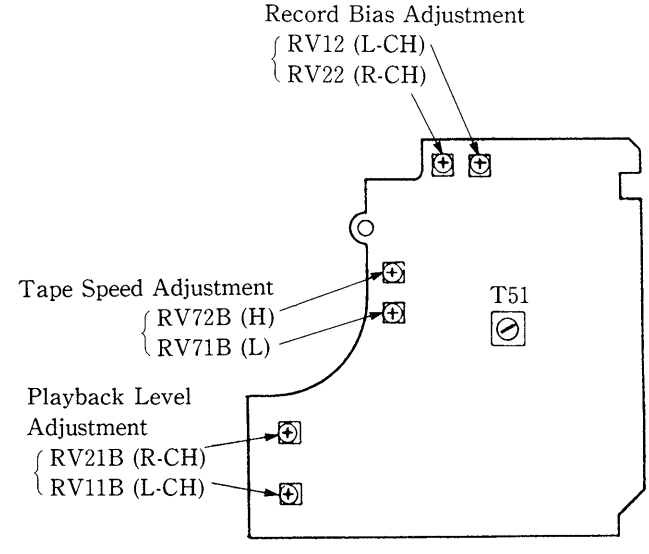
Adjustment Location : main board

Adjustment Location :

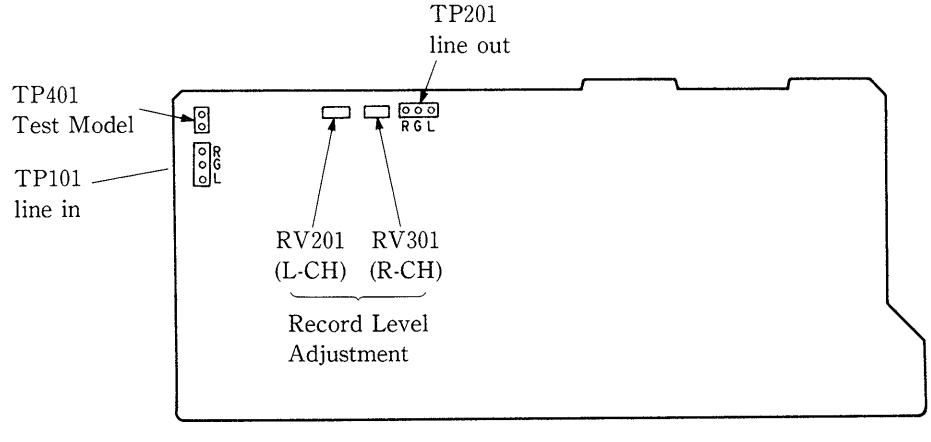
【MD-A Board】 —Component Side—



【MD-B Board】 —Component Side—



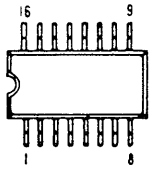
【TC Main Board】 —Component Side—



SECTION 5
DIAGRAMS

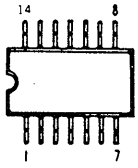
5-1. SEMICONDUCTOR LEAD LAYOUTS

CD4052BCM
CD4053BCM
CXA1578M



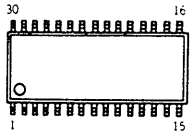
(TOP VIEW)

CD4066BCM
SN74HC32ANS



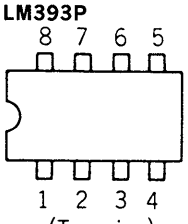
(TOP VIEW)

CXA1331M



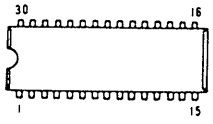
TOP VIEW

LB1639
LM393P



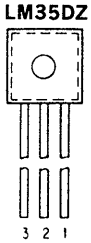
(Top view)

LC7822

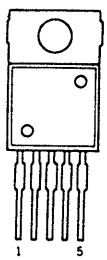


(Top view)

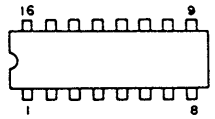
LM35DZ



LM3875-S

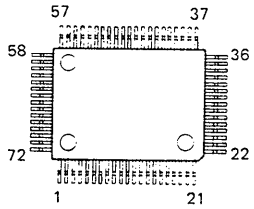


MC14052BCP
XR1091DCP

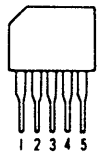


(TOP VIEW)

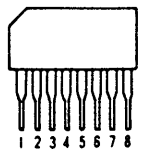
M50964-256FP



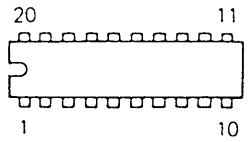
M51953BL



M5218AL
M5230L-A
μPC1237HA

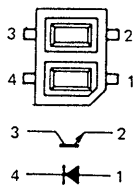


M5229P

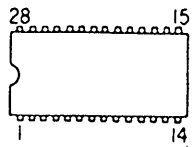


(Top view)

NJL5165K-B

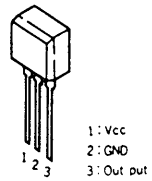


NJU7305L

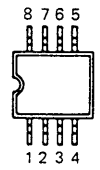


(Top view)

PST572E

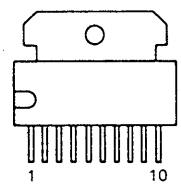


RC4558PS
μPC4570G2



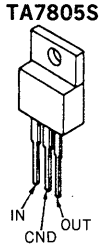
(TOP VIEW)

TA7272P

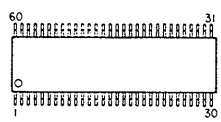


MARKING SIDE VIEW

TA7805S

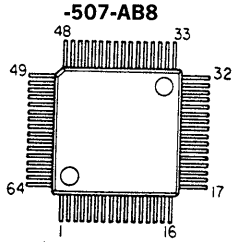


TD62C950RF

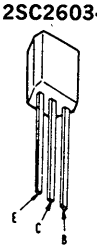


(TOPVIEW)

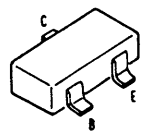
μPD78011GC
-507-AB8



DTA114ES
DTC114ES
2SC2603-EF



DTA144EK
RN1402
RN2402
2SA1602-F
2SC4154-F



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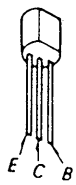
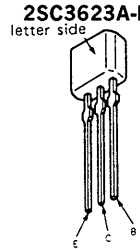
2SB1013-4
2SC1841-PAFAEA
2SD1616A-K



2SA1175-HFE
2SC3623A-LK



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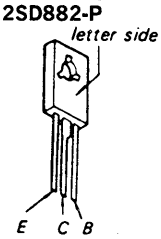
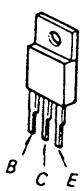
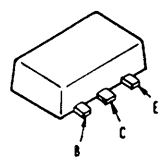
2SD882-P



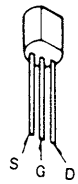
2SB1094-LK
2SD2012



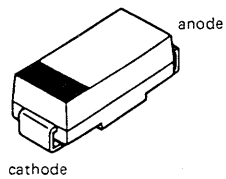
2SB1122-S
2SD1622-S



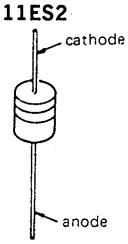
2SK246-GR



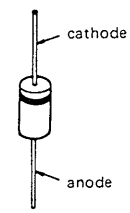
EC10DS2



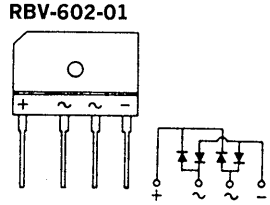
HZS27-2L
HZS30-2L
HZS6C3L
HZS9A2L
UZL-36M
11ES2



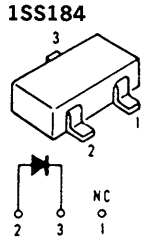
HZ12B2L
UZ-5.1BSC
UZP-6.2BC
1N4148M



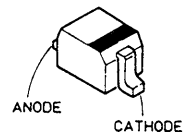
RBV-602-01



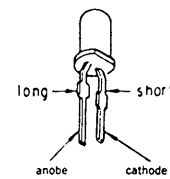
UZM5.6X
1SS184



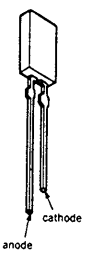
1SS352



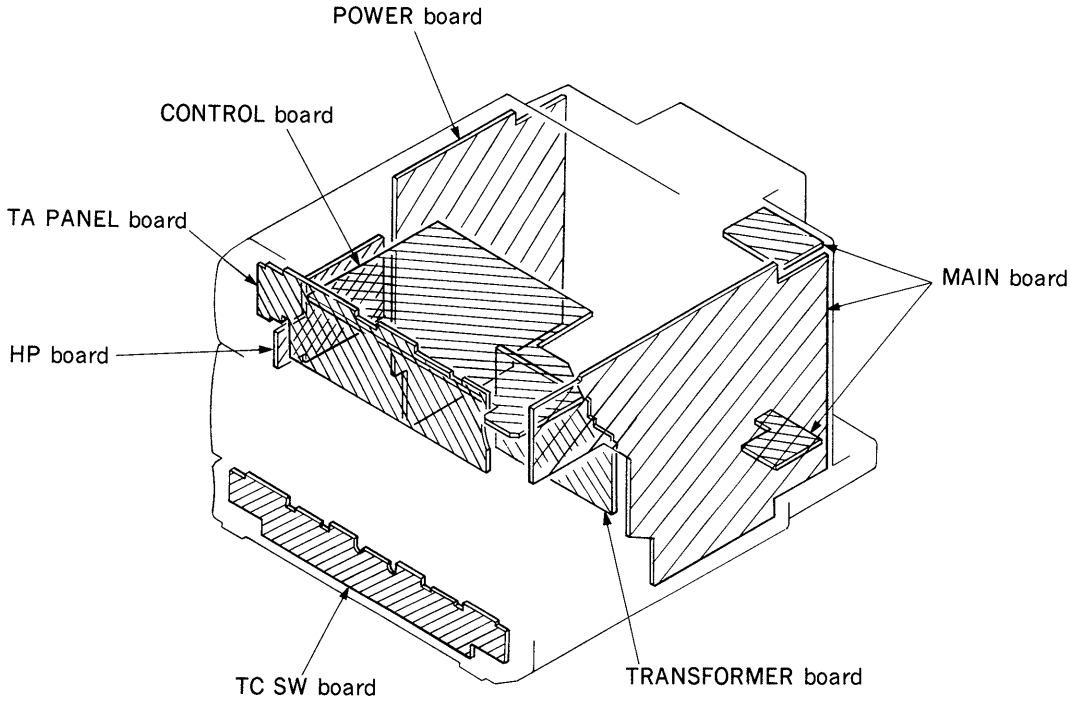
SEL2210S-CD

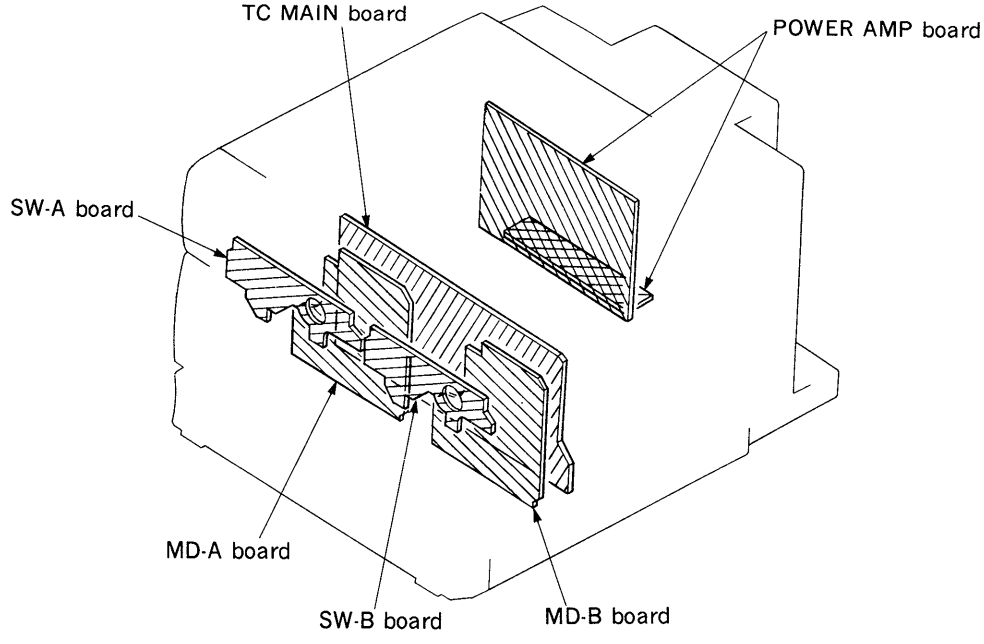


SEL4225C-C
SEL4525C-C
SEL4825A



5-2. CIRCUIT BOARDS LOCATION





DXA-H3750 DXA-H3750

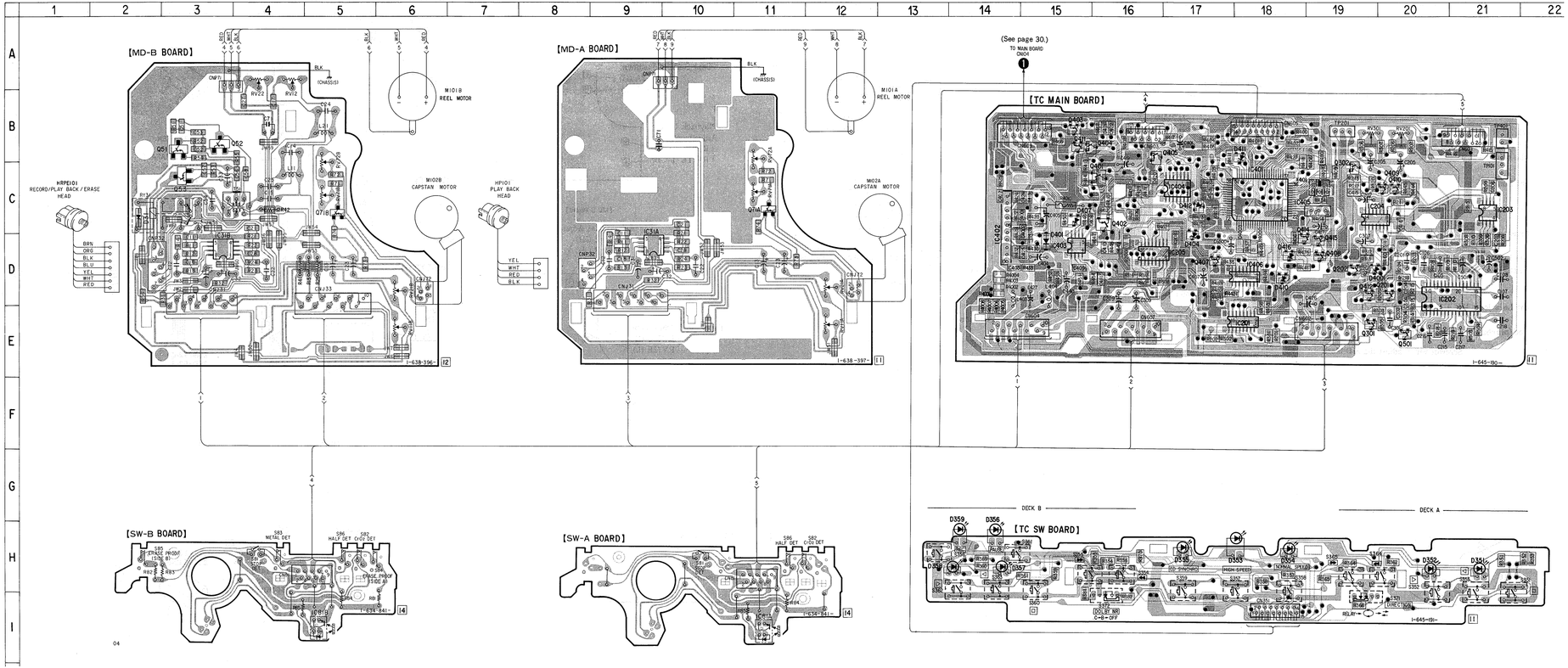
● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D31	C-2	IC402	C-14
D351	H-21	IC403	D-15
D352	H-20	IC404	C-17
D353	H-17	IC405	C-19
D354	H-18	IC406	D-18
D355	H-17		
D356	H-14	Q51	B-3
D357	H-14	Q52	B-3
D358	H-14	Q53	C-3
D359	H-14	Q71A	C-11
D401	D-15	Q71B	C-5
D404	D-17	Q201	D-20
D407	C-15	Q202	D-19
D410	D-18	Q301	E-19
D411	B-18	Q302	C-19
D412	C-17	Q401	C-16
D416	D-18	Q402	C-16
D4001	D-19	Q403	B-15
		Q404	B-15
IC31A	D-9	Q405	B-16
IC31B	D-3	Q407	D-17
IC81A	I-11	Q408	D-19
IC81B	I-5	Q409	C-20
IC201	E-18	Q410	C-20
IC202	D-20	Q411	B-15
IC203	C-21	Q412	D-19
IC204	C-19	Q414	D-18
IC205	D-16	Q415	D-19
IC401	C-18	Q501	E-20

Note:

- ○— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ● : Through hole.
- ▒ : Pattern on the side which is seen.
- ▒ : Pattern of the rear side.

5-3. PRINTED WIRING BOARDS —DECK SECTION— ●Refer to page 13 for Semiconductor Lead Layouts.



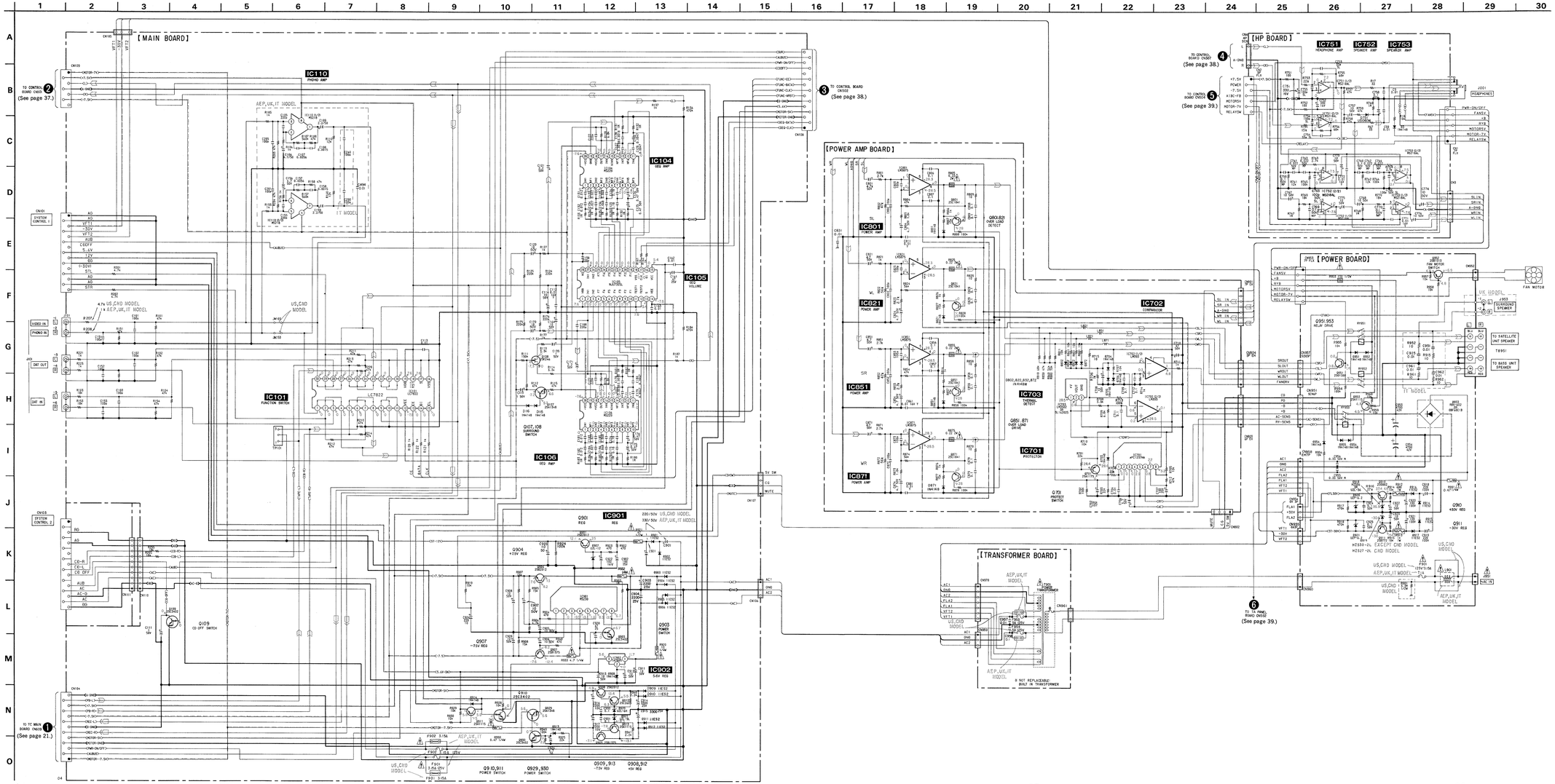
5-4. SCHEMATIC DIAGRAM —DECK SECTION— • Refer to page 40 for IC Block Diagrams.

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¹/₄W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.
- ▭ : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line
- ▬ : B– Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ( ) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⊳ : PB (DECK A)
  ▷ : PB (DECK B)
  ▷ : REC (DECK B)



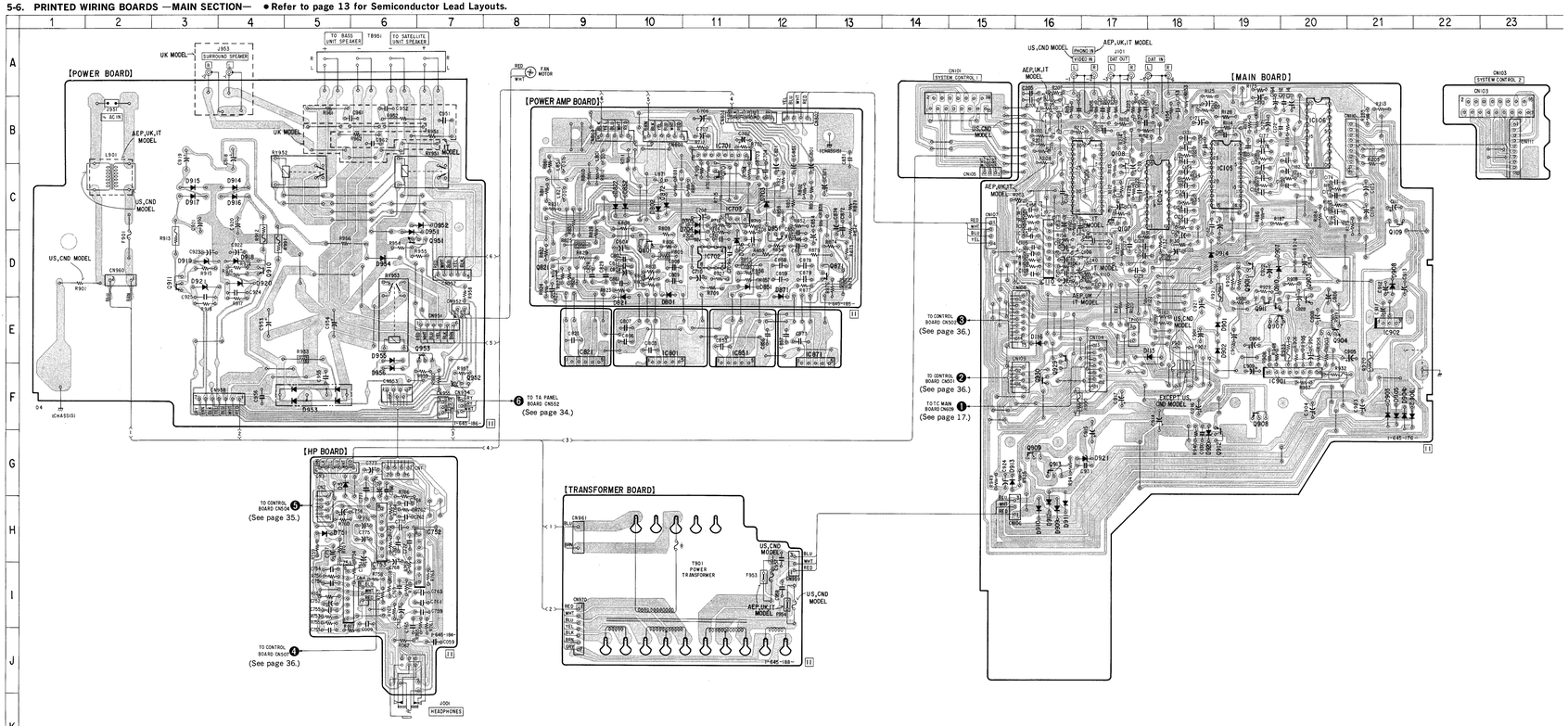
Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- : nonflammable resistor.
- : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line
- : B− Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : PLAY
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : PB (DECK A)
  : REC (DECK B)

CND: Canadian model
IT: Italian model

5-6. PRINTED WIRING BOARDS —MAIN SECTION— • Refer to page 13 for Semiconductor Lead Layouts.



• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D115	E-17	IC101	C-17
D116	E-16	IC104	C-18
D703	C-12	IC105	C-19
D704	D-11	IC106	B-20
D705	C-11	IC110	D-16
D706	D-11	IC701	B-11
D801	D-10	IC702	D-11
D802	C-10	IC703	C-11
D821	E-10	IC751	I-5
D822	C-9	IC752	H-7
D851	D-11	IC753	H-6
D852	C-10	IC801	E-10
D871	E-12	IC821	E-9
D872	C-10	IC851	E-11
D901	E-19	IC871	E-12
D902	E-19	IC901	F-20
D903	F-21	IC902	E-21
D904	F-21		
D905	F-21	Q107	C-17
D906	F-21	Q108	C-17
D907	D-19	Q109	C-21
D908	D-21	Q701	C-11
D909	H-16	Q801	D-10
D910	H-16	Q821	D-9
D911	H-16	Q851	D-12
D912	H-16	Q871	D-13
D913	G-15	Q901	D-19
D914	D-18	Q903	D-20
(D914)	C-4	Q904	E-20
D915	C-3	Q907	E-19
D916	C-4	Q908	F-19
D917	C-3	Q909	G-16
D918	D-4	Q910	E-19
D919	D-3	(Q910)	D-4
D920	G-18	Q911	E-19
(D920)	D-4	(Q911)	D-3
D921	G-17	Q912	G-18
(D921)	D-3	Q913	G-16
D951	D-6	Q929	E-16
D952	C-7	Q930	F-16
D953	F-5	Q951	D-7
D954	D-6	Q952	F-7
D955	E-6	Q953	E-7
D956	F-6		

( ): POWER BOARD

Note:

• ○——: parts extracted from the component side.

• CND: Canadian model

• IT: Italian model

DXA-H3750 DXA-H3750

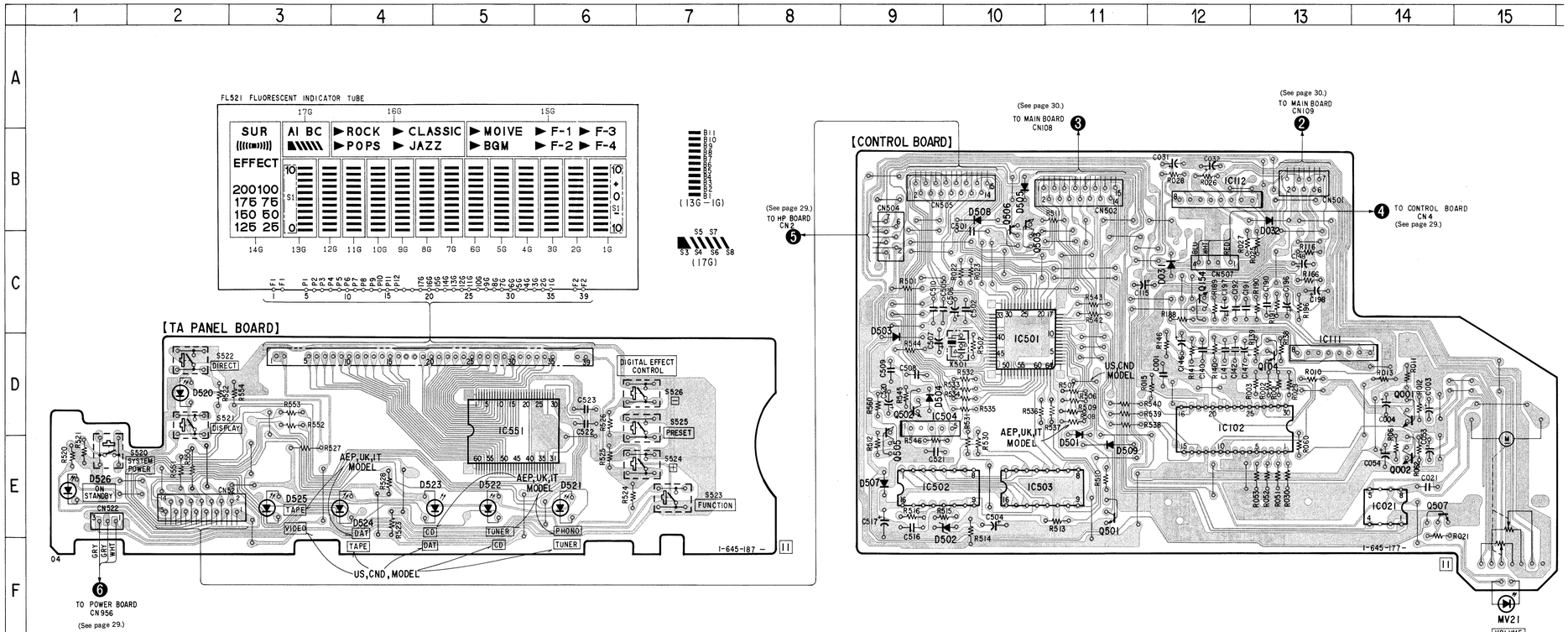
5-7. PRINTED WIRING BOARDS —PANEL SECTION—

● Refer to page 13 for Semiconductor Lead Layouts.

● Semiconductor Location

Ref. No.	Location
D031	C-12
D032	B-13
D501	E-11
D502	E-9
D503	D-9
D504	D-9
D505	B-10
D507	E-9
D508	B-10
D509	E-11
D520	D-2
D521	E-6
D522	E-5
D523	E-4
D524	E-4
D525	E-3
D526	E-1
IC021	E-14
IC102	D-12
IC111	D-13
IC112	B-12
IC501	D-10
IC502	E-9
IC503	E-10
IC504	D-9
IC551	D-5
Q001	D-14
Q002	E-14
Q104	D-13
Q154	C-12
Q501	E-11
Q502	D-9
Q503	C-10
Q505	E-9
Q506	C-10
Q507	E-14

Note:
● ○—— : parts extracted from the component side.
●CND: Canadian model
●IT: Italian model



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⊖ : B+ Line
- ⊖ : B− Line
- ⊖ Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ※ : Impossible measurement point
- ⊖ Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ≫ : PB (DECK A)

□ CND : Canadian model
□ IT : Italian model

【TA PANEL BOARD】

TO POWER BOARD CN956 (See page 28.) 6

CN522 CN523

FL521 FLUORESCENT INDICATOR TUBE

IC551 FL DRIVE

SYSTEM POWER S520
PLAY S521
DIRECT S522
FUNCTION S523
S524
PRESET S525
STAND-BY S526

DIGITAL EFFEC CONTROL

AEP, UK, IT MODEL: PHONO, TUNER, CD, DAT, TAPE, VIDEO

US, CND MODEL: TUNER, CD, DAT, TAPE

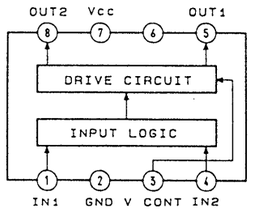
【CONTROL BOARD】

IC102 AI BC SWITCH
IC111 AI BC AMP
Q104, I54 AI BC SWITCH
IC112 BUFFER AMP
Q001, 002 MUTING
IC021 MOTOR DRIVE
IC503 SPE. ANA SWITCH
IC502 SPE. ANA
IC504 RESET DET
IC501 SYSTEM CONTROL μPD78016GC
Q501 AU BUS BUFFER
Q502 RESET
Q506 RELAY SWITCH
Q503 MUTING SWITCH

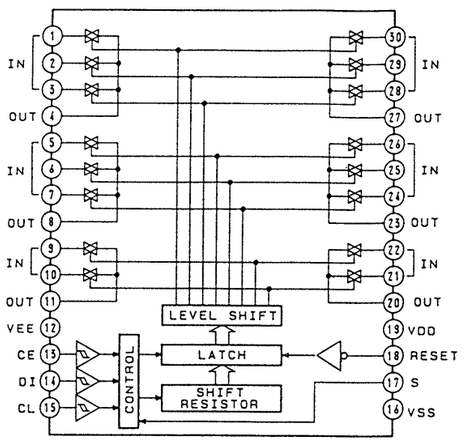
2 TO MAIN BOARD CN09 (See page 24.)
3 TO MAIN BOARD CN108 (See page 26.)
4 TO HP BOARD CN4 (See page 27.)
5 TO HP BOARD CN2 (See page 27.)

• IC Block Diagrams

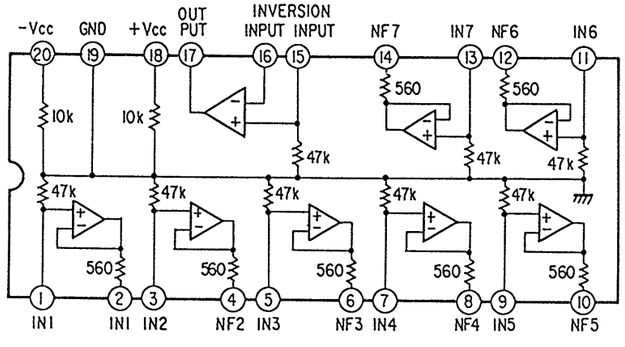
IC021 LB1639



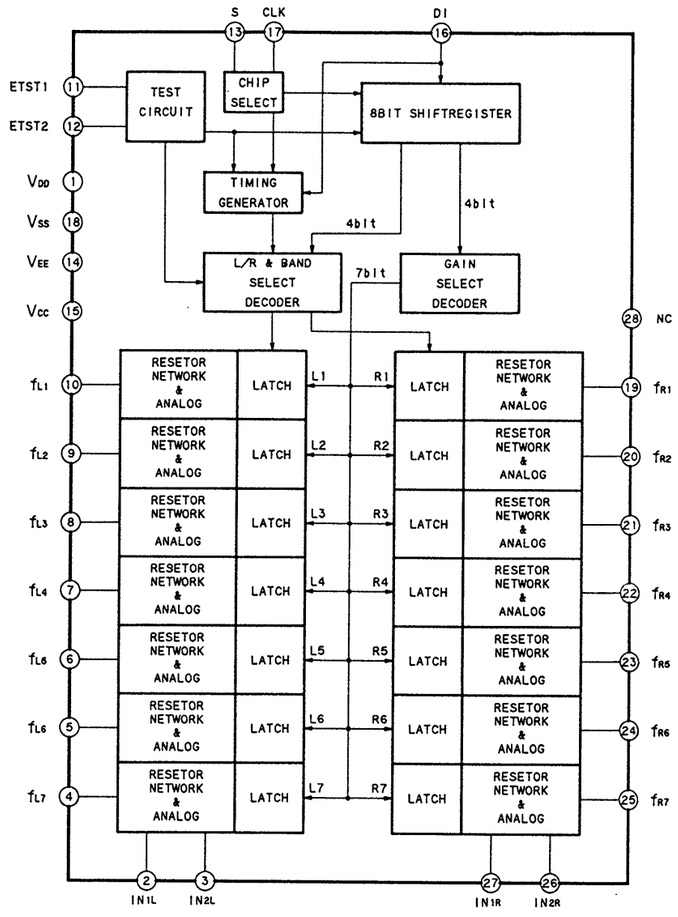
IC101, 102 LC7822



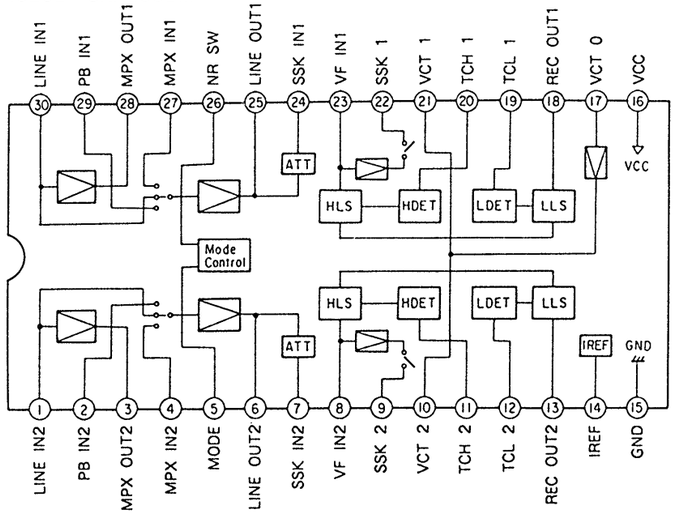
IC104, 106 M5229P



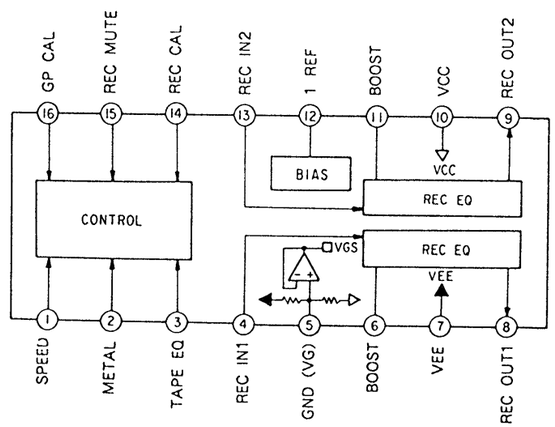
IC105 NJU7305L



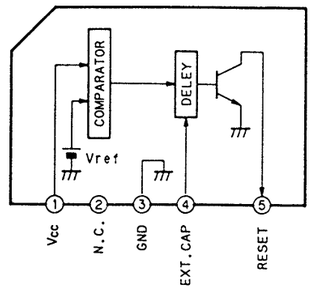
IC202 CXA1331M



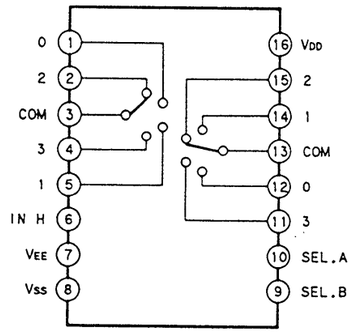
IC205 CXA1578M



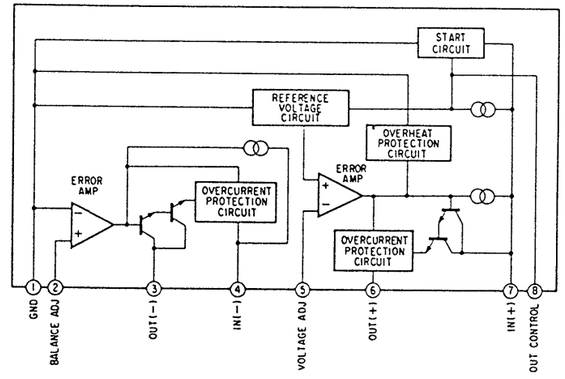
IC504 M51953AL



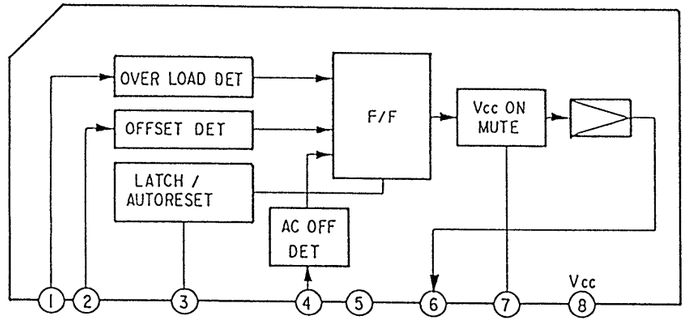
IC406 CD4052BCM
IC503 MC14052BCP



IC901 M5230L-A



IC701 μPD1237HA



SECTION 6
EXPLEDED VIEWS

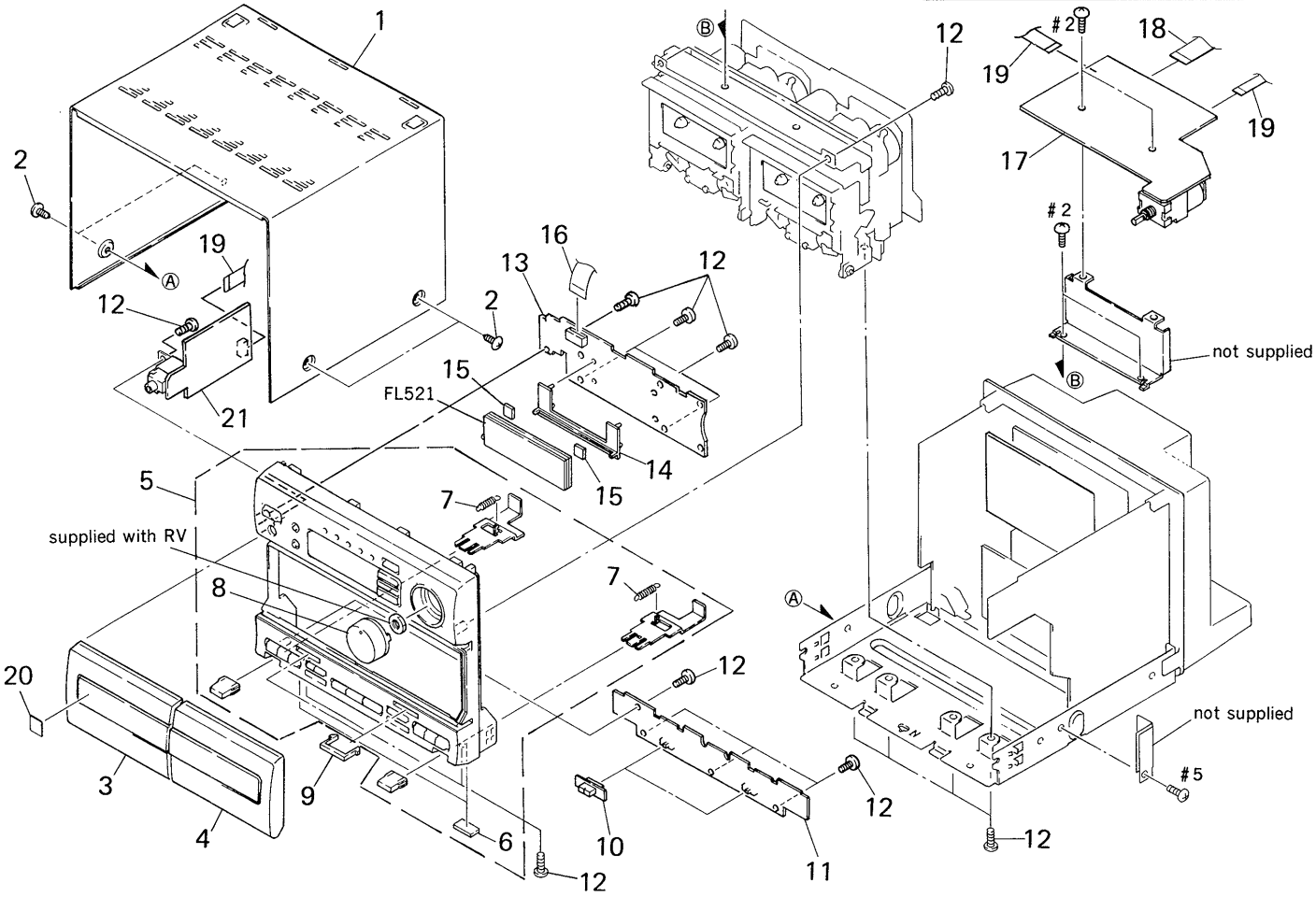
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.
- IT : Italian model

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

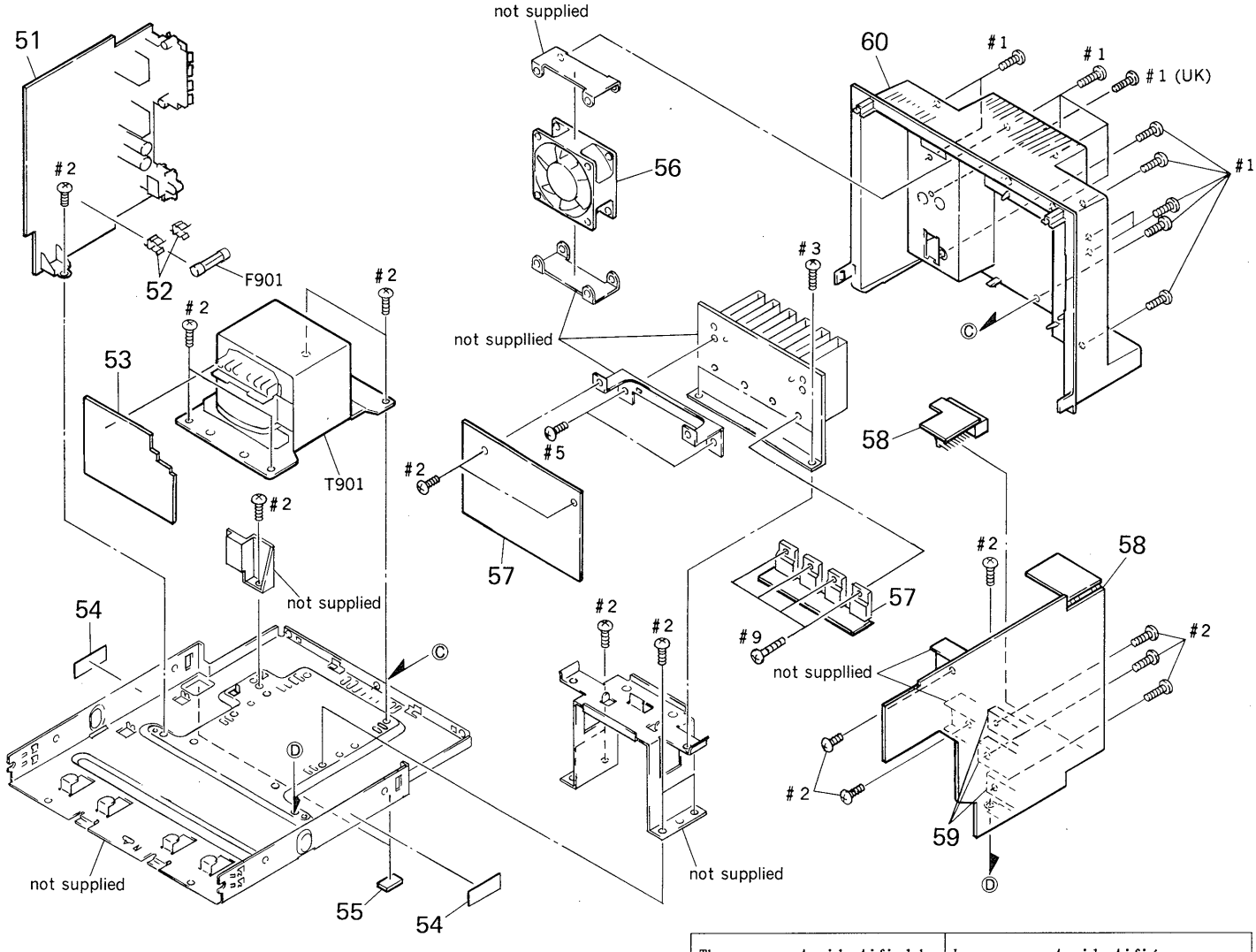
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark
* 1	4-953-614-11	CASE	
2	3-363-099-01	SCREW (CASE 3 TP2)	
3	X-4942-819-1	LID (A) ASSY, CASSETTE	
4	X-4942-824-1	LID (B) ASSY, CASSETTE	
5	X-4942-822-2	PANEL ASSY, FRONT (US, Canadian)	
5	X-4942-823-2	PANEL ASSY, FRONT (AEP, UK, IT)	
6	4-930-336-21	FOOT (FELT)	
7	3-489-099-11	SPRING, TENSION	
8	X-4942-539-1	KNOB (VOL) ASSY	
9	4-953-606-01	COVER, AZIMUTH	
10	4-953-601-01	KNOB, SLIDE	
* 11	A-4356-154-A	TC SW BOARD, COMPLETE (IT)	
* 11	A-4356-182-A	TC SW BOARD, COMPLETE (US, Canadian, AEP, UK)	
12	4-951-620-01	SCREW (2.6X8), +BVTP	
* 13	A-4356-151-A	TA PANEL BOARD, COMPLETE (IT)	
* 13	A-4356-175-A	TA PANEL BOARD, COMPLETE (US, Canadian)	
* 13	A-4356-179-A	TA PANEL BOARD, COMPLETE (AEP, UK)	
* 14	4-953-602-01	HOLDER (FL TUBE)	
* 15	4-921-941-01	CUSHION (FL)	
16	1-575-903-11	WIRE, FLAT TYPE (15 CORE)	
* 17	A-4356-152-A	CONTROL BOARD, COMPLETE (IT)	
* 17	A-4356-176-A	CONTROL BOARD, COMPLETE (US, Canadian)	
* 17	A-4356-180-A	CONTROL BOARD, COMPLETE (AEP, UK)	
18	1-696-727-11	WIRE (FLAT TYPE) (15 CORE)	
19	1-575-731-11	WIRE, FLAT TYPE (7 CORE)	
20	3-703-710-41	STICKER, SONY SYMBOL (12)	
* 21	A-4356-153-A	HP BOARD, COMPLETE (IT)	
* 21	A-4356-177-A	HP BOARD, COMPLETE (US, Canadian)	
* 21	A-4356-181-A	HP BOARD, COMPLETE (AEP, UK)	
FL521	1-519-735-11	INDICATIOR TUBE, FLUORESCENT	

6-2. CHASSIS SECTION

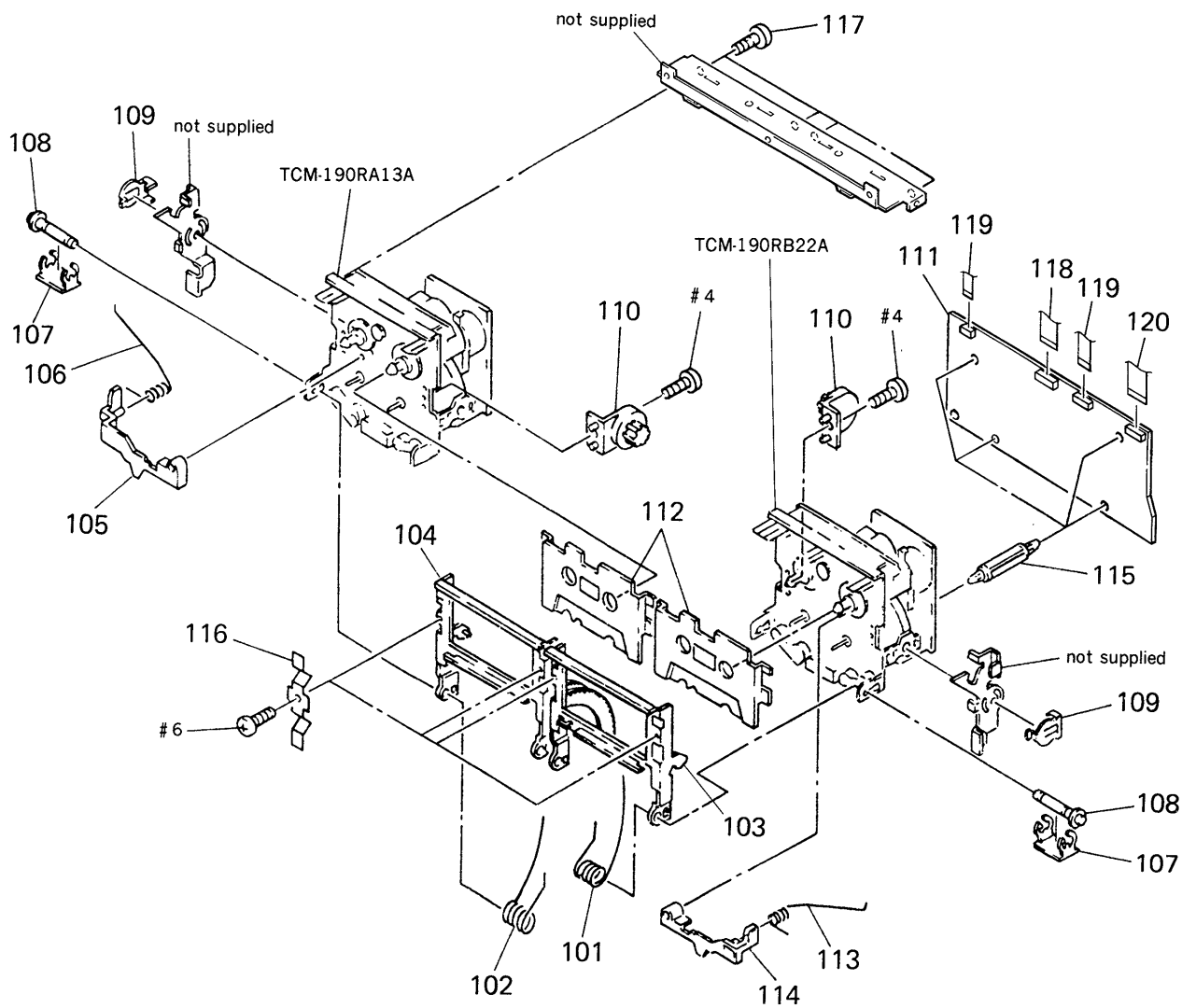


The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 51	A-4356-165-A	POWER BOARD, COMPLETE (US)	
* 51	A-4356-168-A	POWER BOARD, COMPLETE (AEP)	
* 51	A-4356-171-A	POWER BOARD, COMPLETE (UK)	
* 51	A-4356-490-A	POWER BOARD, COMPLETE (Canadian)	
* 51	1-4356-558-A	POWER BOARD, COMPLETE (IT)	
* 52	1-533-213-31	HOLDER, FUSE	
* 53	1-645-188-11	TRANSFORMER BOARD	
* 54	3-703-044-26	LABEL, CAUTION (US, Canadian)	
55	4-930-336-21	FOOT (FELT)	
56	1-541-860-41	MOTOR, DC FAN	
* 57	A-4356-149-A	POWER AMP BOARD, COMPLETE (IT)	
* 57	A-4356-167-A	POWER AMP BOARD, COMPLETE (US, Canadian)	
* 57	A-4356-170-A	POWER AMP COMBINED BOARD, COMPLETE (AEP, UK)	

Ref. No.	Part No.	Description	Remark
* 58	A-4356-150-A	MAIN BOARD, COMPLETE (IT)	
* 58	A-4356-174-A	MAIN BOARD, COMPLETE (US, Canadian)	
* 58	A-4356-178-A	MAIN BOARD, COMPLETE (AEP, UK)	
* 59	3-309-144-21	HEAT SINK	
* 60	4-953-618-01	PANEL, BACK (US, Canadian)	
* 60	4-953-618-11	PANEL, BACK (AEP, IT)	
* 60	4-953-618-21	PANEL, BACK (UK)	
⚠F901	1-532-285-00	FUSE T1A (AEP, UK, IT)	
⚠F901	1-532-745-11	FUSE 3.15A 125V (US, Canadian)	
⚠T901	1-697-006-11	TRANSFORMER, POWER (US, Canadian)	
⚠T901	1-697-007-11	TRANSFORMER, POWER (AEP, IT)	
⚠T901	1-697-008-11	TRANSFORMER, POWER (UK)	

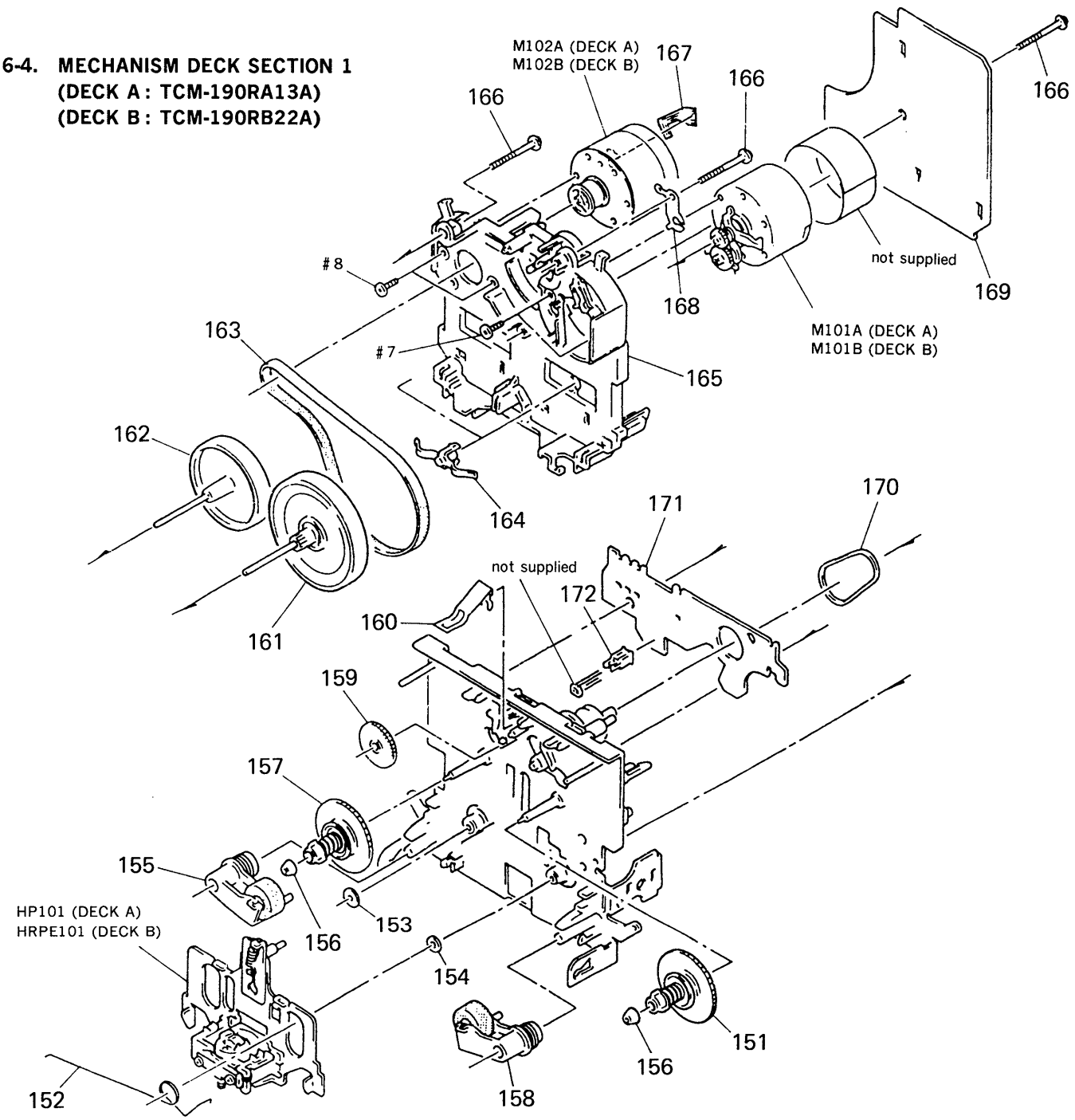
6-3. CASSETTE HOLDER SECTION



Ref. No.	Part No.	Description	Remark
101	3-354-960-01	SPRING (LOADING R), TORSION	
102	3-354-959-01	SPRING (LOADING L), TORSION	
103	X-3362-856-1	HOLDER (R) ASSY, CASSETTE	
104	X-3362-857-1	HOLDER (L) ASSY, CASSETTE	
105	3-354-955-01	LEVER (EJ SAFTY LEVER L)	
106	3-354-961-01	SPRING (EJ SAFTY SPRING L)	
107	3-367-720-01	RING (W), RETAINING	
108	3-367-721-01	SHAFT (FULCRUM SHAFT)	
109	3-354-957-01	JOINT (LOCK LEVER)	
110	3-354-963-01	DAMPER	

Ref. No.	Part No.	Description	Remark
* 111	A-4356-155-A	TC MAIN BOARD, COMPLETE (IT)	
* 111	A-4356-183-A	TC MAIN BOARD, COMPLETE (US, Canadian, AEP, UK)	
112	3-367-711-01	RETAINER, CASSETTE	
113	3-354-962-01	SPRING (EJ SAFTY SPRING R)	
114	3-354-956-01	LEVER (EJ SAFTY LEVER R)	
* 115	3-682-419-21	HOLDER, P.C.B	
116	3-340-137-01	SPRING, CASSETTE RETAINER	
117	4-951-620-01	SCREW (2.6X8), +BVTP	
118	1-696-731-11	WIRE (FLAT TYPE) (15 CORE)	
119	1-696-725-11	WIRE (FLAT TYPE) (9 CORE)	
120	1-696-726-11	WIRE (FLAT TYPE) (13 CORE)	

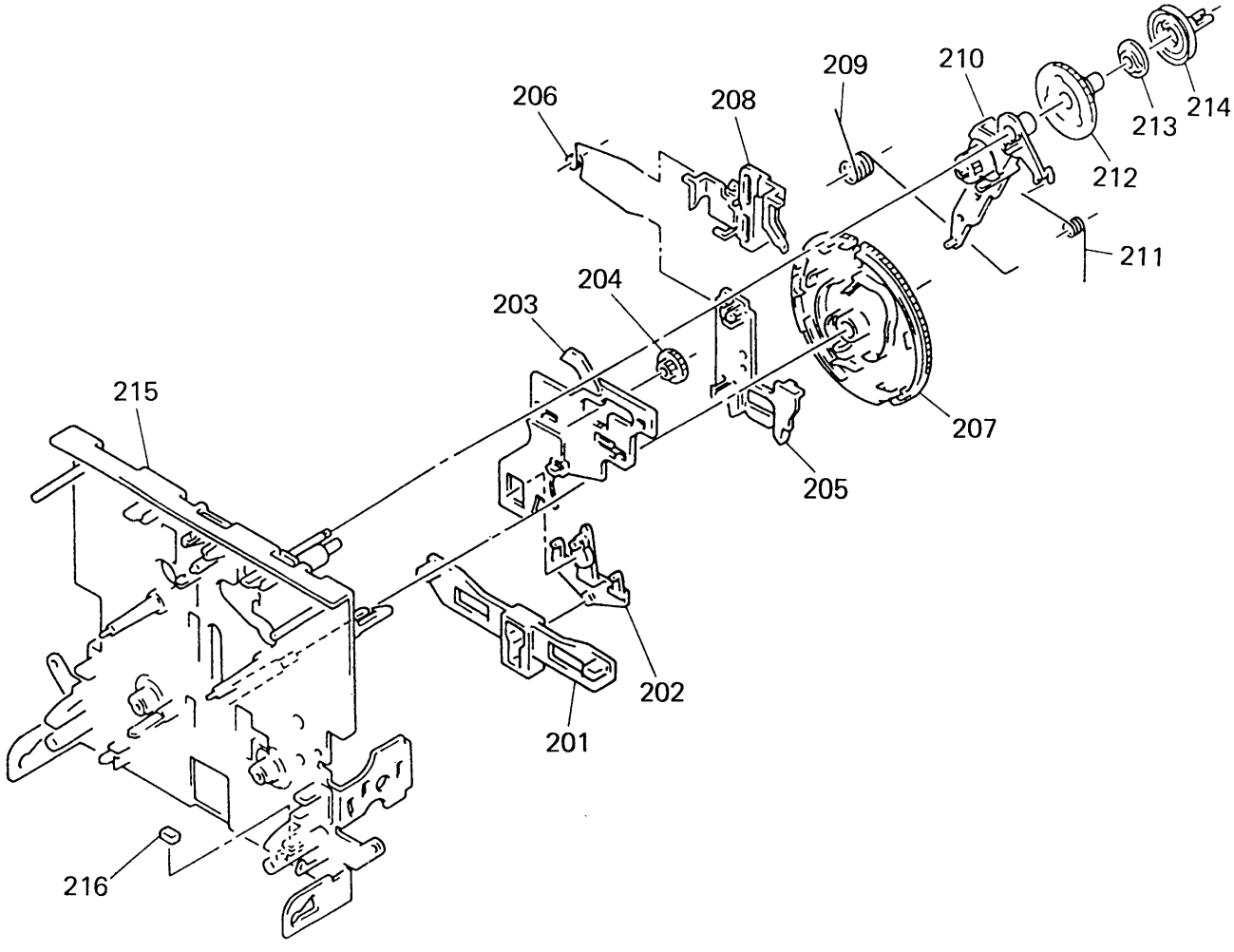
6-4. MECHANISM DECK SECTION 1
(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB22A)



Ref. No.	Part No.	Description	Remark
151	X-3359-404-1	TABLE ASSY, REEL	
152	3-359-455-01	SPRING, TORSION	
153	3-356-714-01	WASHER	
154	3-356-713-01	WASHER	
155	X-3359-409-1	LEVER (PINCH LEVER REV) ASSY	
156	3-362-308-01	CAP (REEL)	
157	X-3362-078-1	TABLE ASSY (B), REEL	
158	X-3359-408-1	LEVER (PINCH LEVER FWD) ASSY	
159	3-359-424-01	GEAR (REV GEAR)	
160	3-359-430-01	SPRING(CASSETTE RETAINER), LEAF	
161	X-3359-406-1	FLYWHEEL (FWD) ASSY	
162	X-3359-410-1	FLYWHEEL (REV) ASSY	
163	3-359-417-01	BELT (FLAT), CAPSTAN	
164	3-575-321-00	RETAINER, THRUST, CAPSTAN	
* 165	3-359-436-01	BASE (THRUST RETAINER), FITTING	

Ref. No.	Part No.	Description	Remark
166	3-359-414-01	SCREW (+PTPWH 2X23)	
167	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
168	3-359-450-01	PLATE, GROUND	
* 169	A-2006-399-A	MD-A BOARD, COMPLETE	
* 169	A-2006-400-A	MD-B BOARD, COMPLETE	
170	3-359-466-01	BELT (FR), SQUARE	
* 171	1-634-841-14	SW-A BOARD (DECK A)	
* 171	1-634-841-14	SW-B BOARD (DECK B)	
172	3-343-419-01	HOLDER (S SENSER A)	
HP101	A-2003-868-F	BASE ASSY, HEAD (DECK A)	
HRPE101	A-2003-838-F	BASE ASSY, HEAD (DECK B)	
M101A	X-3363-501-1	MOTOR ASSY, REEL (DECK A)	
M101B	X-3363-501-1	MOTORASSY, REEL (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK A)	
M102B	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK B)	

6-5. MECHANISM DECK SECTION 2
(DECK A : TCM-190RA13A)
(DECK B : TCM-190RB22A)



Ref. No.	Part No.	Description	Remark
* 201	3-359-425-01	SLIDER (REVERSE SLIDER)	
202	3-359-426-01	LEVER (REVERSE LEVER)	
* 203	3-359-415-01	SLIDER (TRIGGER SLIDER)	
204	3-359-448-01	GEAR (TRIGGER)	
* 205	3-359-427-01	SLIDER (LEVERSE SLIDER)	
206	3-359-454-01	SPRING, TORSION	
207	3-359-420-01	GEAR (CAM GEAR)	
208	3-359-429-01	SLIDER (BRAKE PLATE)	

Ref. No.	Part No.	Description	Remark
209	3-359-456-01	SPRING(TRIGGER SPRING), TORSION	
210	X-3359-405-1	LEVER (FR ARM) ASSY	
211	3-359-453-01	SPRING (FR ARM), TORSION	
212	3-359-419-01	GEAR (FR GEAR)	
213	3-359-421-01	CLUTCH (REEL DISK)	
214	3-359-418-01	PULLEY (FR PULLEY)	
215	X-3363-790-1	CHASSIS ASSY, MECHANICAL	
216	3-359-469-01	SPACER	

SECTION 7
ELECTRICAL PARTS LIST

CONTROL

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- IT : Italian model

Ref. No.	Part No.	Description			Remark
*	A-4356-152-A	CONTROL BOARD, COMPLETE (IT)			
*	A-4356-176-A	CONTROL BOARD, COMPLETE (US, Canadian)			
*	A-4356-180-A	CONTROL BOARD, COMPLETE (AEP, UK)			
		**********			
		< CAPACITOR >			
C001	1-161-379-00	CERAMIC	0.01uF	20%	25V
C003	1-124-907-11	ELECT	10uF	20%	50V
C004	1-124-910-11	ELECT	47uF	20%	50V
C021	1-136-153-00	FILM	0.01uF	5%	50V
C031	1-124-472-11	ELECT	470uF	20%	10V
C032	1-124-472-11	ELECT	470uF	20%	10V
C053	1-124-907-11	ELECT	10uF	20%	50V
C054	1-124-910-11	ELECT	47uF	20%	50V
C115	1-124-903-11	ELECT	1uF	20%	50V
C140	1-136-165-00	FILM	0.1uF	5%	50V
C141	1-136-165-00	FILM	0.1uF	5%	50V
C142	1-162-282-31	CERAMIC	100PF	10%	50V
C146	1-124-925-11	ELECT	2.2uF	20%	100V
C147	1-124-903-11	ELECT	1uF	20%	50V
C148	1-124-443-00	ELECT	100uF	20%	10V
C190	1-136-165-00	FILM	0.1uF	5%	50V
C191	1-136-165-00	FILM	0.1uF	5%	50V
C192	1-162-282-31	CERAMIC	100PF	10%	50V
C196	1-124-925-11	ELECT	2.2uF	20%	100V
C197	1-124-903-11	ELECT	1uF	20%	50V
C198	1-124-443-00	ELECT	100uF	20%	10V
C501	1-161-379-00	CERAMIC	0.01uF	20%	25V
C502	1-164-159-11	CERAMIC	0.1uF		50V
C504	1-126-233-11	ELECT	22uF	20%	50V
C505	1-164-159-11	CERAMIC	0.1uF		50V
C506	1-125-623-11	CAP, DOUBLE LAYEYERS			0.22F
C507	1-124-907-11	ELECT	10uF	20%	50V
C508	1-136-173-00	FILM	0.47uF	5%	50V
C509	1-164-159-11	CERAMIC	0.1uF		50V
C510	1-161-379-00	CERAMIC	0.01uF	20%	25V
C516	1-162-294-31	CERAMIC	0.001uF	10%	50V
C517	1-124-477-11	ELECT	47uF	20%	25V
C520	1-124-907-11	ELECT	10uF	20%	50V
C521	1-136-165-00	FILM	0.1uF	5%	50V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN501	1-568-850-11	SOCKET, CONNECTOR 7P	
* CN502	1-568-858-11	SOCKET, CONNECTOR 15P	
* CN504	1-568-850-11	SOCKET, CONNECTOR 7P	
* CN505	1-568-858-11	SOCKET, CONNECTOR 15P	
		< DIODE >	
D031	8-719-987-63	DIODE 1N4148M	
D032	8-719-987-63	DIODE 1N4148M	
D501	8-719-987-63	DIODE 1N4148M	
D502	8-719-010-39	DIODE UZ-5.1BSC	
D503	8-719-987-63	DIODE 1N4148M	
D504	8-719-987-63	DIODE 1N4148M	
D505	8-719-987-63	DIODE 1N4148M	
D507	8-719-987-63	DIODE 1N4148M	
D508	8-719-987-63	DIODE 1N4148M	
D509	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC021	8-759-820-62	IC LB1639	
IC102	8-759-805-14	IC LC7822	
IC111	8-759-634-50	IC M5218AL	
IC112	8-759-634-50	IC M5218AL	
IC501	8-759-081-00	IC uPD78011GC-507-AB8	
IC502	8-759-991-11	IC XR1091DCP	
IC503	8-759-000-48	IC MC14052BCP	
IC504	8-759-605-16	IC M51953BL	
		< VARIABLE RESISTOR >	
MV021	1-241-999-11	RES, VAR, CARBON 100K/100K (VOLUME)	
		< TRANSISTOR >	
Q001	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q002	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q104	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q154	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q501	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q502	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q503	8-729-900-61	TRANSISTOR DTA114ES	

CONTROL HP

Ref. No.	Part No.	Description				Remark
Q505	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q506	8-729-900-61	TRANSISTOR	DTA114ES			
Q507	8-729-900-80	TRANSISTOR	DTC114ES			
		< RESISTOR >				
R001	1-247-876-11	CARBON	75K	5%	1/4W	
R002	1-247-887-00	CARBON	220K	5%	1/4W	
R003	1-247-903-00	CARBON	1M	5%	1/4W	
R010	1-249-417-11	CARBON	1K	5%	1/4W	F
R011	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R012	1-247-895-00	CARBON	470K	5%	1/4W	
R013	1-249-429-11	CARBON	10K	5%	1/4W	
R015	1-249-429-11	CARBON	10K	5%	1/4W	
R021	1-249-413-11	CARBON	470	5%	1/4W	F
R022	1-249-417-11	CARBON	1K	5%	1/4W	F
R023	1-249-417-11	CARBON	1K	5%	1/4W	F
R025	1-249-441-11	CARBON	100K	5%	1/4W	
R026	1-249-441-11	CARBON	100K	5%	1/4W	
R027	1-249-417-11	CARBON	1K	5%	1/4W	F
R028	1-249-417-11	CARBON	1K	5%	1/4W	F
R029	1-249-432-11	CARBON	18K	5%	1/4W	
R030	1-249-432-11	CARBON	18K	5%	1/4W	
R051	1-247-876-11	CARBON	75K	5%	1/4W	
R052	1-247-887-00	CARBON	220K	5%	1/4W	
R053	1-247-903-00	CARBON	1M	5%	1/4W	
R060	1-249-417-11	CARBON	1K	5%	1/4W	F
R061	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R062	1-247-895-00	CARBON	470K	5%	1/4W	
R116	1-249-437-11	CARBON	47K	5%	1/4W	
R138	1-249-435-11	CARBON	33K	5%	1/4W	
R139	1-249-432-11	CARBON	18K	5%	1/4W	
R140	1-247-891-00	CARBON	330K	5%	1/4W	
R141	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R146	1-249-441-11	CARBON	100K	5%	1/4W	
R166	1-249-437-11	CARBON	47K	5%	1/4W	
R188	1-249-435-11	CARBON	33K	5%	1/4W	
R189	1-249-432-11	CARBON	18K	5%	1/4W	
R190	1-247-891-00	CARBON	330K	5%	1/4W	
R191	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R196	1-249-441-11	CARBON	100K	5%	1/4W	
R501	1-249-417-11	CARBON	1K	5%	1/4W	F
R502	1-247-903-00	CARBON	1M	5%	1/4W	
R506	1-249-429-11	CARBON	10K	5%	1/4W	
R507	1-249-429-11	CARBON	10K	5%	1/4W	
R508	1-249-437-11	CARBON (AEP, UK, IT)	47K	5%	1/4W	
R509	1-249-437-11	CARBON	47K	5%	1/4W	
R510	1-249-429-11	CARBON	10K	5%	1/4W	
R511	1-249-429-11	CARBON	10K	5%	1/4W	
R512	1-249-429-11	CARBON	10K	5%	1/4W	
R513	1-249-429-11	CARBON	10K	5%	1/4W	
R514	1-249-405-11	CARBON	100	5%	1/4W	F
R515	1-249-429-11	CARBON	10K	5%	1/4W	
R516	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R530	1-249-417-11	CARBON	1K	5%	1/4W	F
R531	1-249-417-11	CARBON	1K	5%	1/4W	F
R532	1-249-417-11	CARBON	1K	5%	1/4W	F
R533	1-249-417-11	CARBON	1K	5%	1/4W	F
R534	1-249-417-11	CARBON	1K	5%	1/4W	F
R535	1-249-417-11	CARBON	1K	5%	1/4W	F
R536	1-249-417-11	CARBON	1K	5%	1/4W	F
R537	1-249-417-11	CARBON	1K	5%	1/4W	F
R538	1-249-417-11	CARBON	1K	5%	1/4W	F
R539	1-249-417-11	CARBON	1K	5%	1/4W	F
R540	1-249-417-11	CARBON	1K	5%	1/4W	F
R542	1-249-417-11	CARBON	1K	5%	1/4W	F
R543	1-249-417-11	CARBON	1K	5%	1/4W	F
R544	1-249-433-11	CARBON	22K	5%	1/4W	
R545	1-249-433-11	CARBON	22K	5%	1/4W	
R546	1-249-429-11	CARBON	10K	5%	1/4W	
R560	1-249-429-11	CARBON	10K	5%	1/4W	
		< VIBRATOR >				
X501	1-579-599-21	VIBRATOR, CERAMIC (8.38MHz)				
**********						
*	A-4356-153-A	HP BOARD, COMPLETE (IT)				
*	A-4356-177-A	HP BOARD, COMPLETE (US, Canadian)				
*	A-4356-181-A	HP BOARD, COMPLETE (AEP, UK)				
		**********				
		< CAPACITOR >				
C9	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C59	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C751	1-124-119-00	ELECT	330uF	20%	16V	
C752	1-124-119-00	ELECT	330uF	20%	16V	
C753	1-162-211-31	CERAMIC	33PF	5%	50V	
C754	1-162-211-31	CERAMIC	33PF	5%	50V	
C755	1-162-282-31	CERAMIC	100PF	10%	50V	
C756	1-162-282-31	CERAMIC	100PF	10%	50V	
C757	1-124-907-11	ELECT	10uF	20%	50V	
C758	1-124-463-00	ELECT	0.1uF	20%	50V	
C759	1-136-165-00	FILM	0.1uF	5%	50V	
C760	1-136-165-00	FILM	0.1uF	5%	50V	
C761	1-136-157-00	FILM	0.022uF	5%	50V	
C762	1-136-157-00	FILM	0.022uF	5%	50V	
C763	1-136-157-00	FILM	0.022uF	5%	50V	
C764	1-136-157-00	FILM	0.022uF	5%	50V	

Ref. No.	Part No.	Description				Remark
C765	1-162-282-31	CERAMIC	100PF	10%	50V	
C766	1-162-282-31	CERAMIC	100PF	10%	50V	
C767	1-124-907-11	ELECT	10uF	20%	50V	
C768	1-124-907-11	ELECT	10uF	20%	50V	
C769	1-136-165-00	FILM	0.1uF	5%	50V	
C770	1-136-165-00	FILM	0.1uF	5%	50V	
C771	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C772	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C773	1-124-907-11	ELECT	10uF	20%	50V	
C774	1-124-907-11	ELECT	10uF	20%	50V	
C775	1-124-907-11	ELECT	10uF	20%	50V	
C776	1-124-907-11	ELECT	10uF	20%	50V	
		< CONNECTOR >				
* CN1	1-568-826-11	SOCKET, CONNECTOR 7P				
* CN2	1-568-850-11	SOCKET, CONNECTOR 7P				
* CN4	1-564-506-11	PLUG, CONNECTOR 3P				
		< DIODE >				
D3	8-719-987-63	DIODE 1N4148M				
D751	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC751	8-759-634-50	IC M5218AL				
IC752	8-759-634-50	IC M5218AL				
IC753	8-759-634-50	IC M5218AL				
		< JACK >				
J001	1-562-837-21	JACK (HEADPHONES)				
		< RESISTOR >				
R17	1-249-399-11	CARBON	33	5%	1/4W	F
R67	1-249-399-11	CARBON	33	5%	1/4W	F
R751	1-249-405-11	CARBON	100	5%	1/4W	F
R752	1-249-405-11	CARBON	100	5%	1/4W	F
R753	1-249-431-11	CARBON	15K	5%	1/4W	
R754	1-249-431-11	CARBON	15K	5%	1/4W	
R755	1-249-439-11	CARBON	68K	5%	1/4W	
R756	1-249-439-11	CARBON	68K	5%	1/4W	
R757	1-249-437-11	CARBON	47K	5%	1/4W	
R758	1-249-437-11	CARBON	47K	5%	1/4W	
R759	1-249-437-11	CARBON	47K	5%	1/4W	
R760	1-247-903-00	CARBON	1M	5%	1/4W	
R761	1-249-430-11	CARBON	12K	5%	1/4W	
R762	1-249-430-11	CARBON	12K	5%	1/4W	
R763	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R764	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R765	1-249-441-11	CARBON	100K	5%	1/4W	
R766	1-249-441-11	CARBON	100K	5%	1/4W	
R767	1-247-903-00	CARBON	1M	5%	1/4W	
R768	1-247-903-00	CARBON	1M	5%	1/4W	
R769	1-249-432-11	CARBON	18K	5%	1/4W	
R770	1-249-432-11	CARBON	18K	5%	1/4W	
**********						
*	A-4356-150-A	MAIN BOARD, COMPLETE (IT)				
*	A-4356-174-A	MAIN BOARD, COMPLETE (US, Canadian)				
*	A-4356-178-A	MAIN BOARD, COMPLETE (AEP, UK)				
		**********				
*	3-309-144-21	HEAT SINK				
	7-682-547-04	SCREW +BVTT 3X6 (S)				
		< CAPACITOR >				
C101	1-162-282-31	CERAMIC	100PF	10%	50V	
C102	1-162-282-31	CERAMIC	100PF	10%	50V	
C103	1-162-282-31	CERAMIC	100PF	10%	50V	
C105	1-162-286-31	CERAMIC (AEP, UK, IT)	220PF	10%	50V	
C106	1-124-927-11	ELECT (AEP, UK, IT)	4.7uF	20%	100V	
C107	1-130-480-00	MYLAR (AEP, UK, IT)	0.0056uF	5%	50V	
C108	1-130-473-00	MYLAR (AEP, UK, IT)	0.0015uF	5%	50V	
C109	1-124-925-11	ELECT (AEP, UK, IT)	2.2uF	20%	100V	
C111	1-124-903-11	ELECT	1uF	20%	50V	
C112	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C113	1-161-379-00	CERAMIC	0.01uF	20%	25V	
C114	1-124-907-11	ELECT	10uF	20%	50V	
C115	1-124-903-11	ELECT	1uF	20%	50V	
C120	1-124-907-11	ELECT	10uF	20%	50V	
C121	1-124-925-11	ELECT	2.2uF	20%	100V	
C122	1-162-286-31	CERAMIC	220PF	10%	50V	
C123	1-136-168-00	FILM	0.18uF	5%	50V	
C124	1-136-168-00	FILM	0.18uF	5%	50V	
C125	1-124-902-00	ELECT	0.47uF	20%	50V	
C126	1-124-902-00	ELECT	0.47uF	20%	50V	
C127	1-130-021-00	MYLAR	0.0018uF	10%	50V	
C128	1-130-021-00	MYLAR	0.0018uF	10%	50V	
C129	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C130	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C131	1-136-154-00	FILM	0.012uF	5%	50V	
C132	1-136-154-00	FILM	0.012uF	5%	50V	
C133	1-136-158-00	FILM	0.027uF	5%	50V	
C134	1-136-158-00	FILM	0.027uF	5%	50V	
C135	1-136-163-00	FILM	0.068uF	5%	50V	
C136	1-136-163-00	FILM	0.068uF	5%	50V	

MAIN

Ref. No.	Part No.	Description			Remark
C138	1-162-286-31	CERAMIC	220PF	10%	50V
C139	1-124-903-11	ELECT	1uF	20%	50V
C151	1-162-282-31	CERAMIC	100PF	10%	50V
C152	1-162-282-31	CERAMIC	100PF	10%	50V
C153	1-162-282-31	CERAMIC	100PF	10%	50V
C155	1-162-286-31	CERAMIC (AEP, UK, IT)	220PF	10%	50V
C156	1-124-927-11	ELECT (AEP, UK, IT)	4.7uF	20%	100V
C157	1-130-480-00	MYLAR (AEP, UK, IT)	0.0056uF	5%	50V
C158	1-130-473-00	MYLAR (AEP, UK, IT)	0.0015uF	5%	50V
C159	1-124-925-11	ELECT (AEP, UK, IT)	2.2uF	20%	100V
C161	1-124-477-11	ELECT	47uF	20%	25V
C162	1-161-379-00	CERAMIC	0.01uF	20%	25V
C163	1-161-379-00	CERAMIC	0.01uF	20%	25V
C164	1-124-907-11	ELECT	10uF	20%	50V
C170	1-124-907-11	ELECT	10uF	20%	50V
C171	1-124-925-11	ELECT	2.2uF	20%	100V
C172	1-162-286-31	CERAMIC	220PF	10%	50V
C173	1-136-168-00	FILM	0.18uF	5%	50V
C174	1-136-168-00	FILM	0.18uF	5%	50V
C175	1-124-902-00	ELECT	0.47uF	20%	50V
C176	1-124-902-00	ELECT	0.47uF	20%	50V
C177	1-130-021-00	MYLAR	0.0018uF	10%	50V
C178	1-130-021-00	MYLAR	0.0018uF	10%	50V
C179	1-130-479-00	MYLAR	0.0047uF	5%	50V
C180	1-130-479-00	MYLAR	0.0047uF	5%	50V
C181	1-136-154-00	FILM	0.012uF	5%	50V
C182	1-136-154-00	FILM	0.012uF	5%	50V
C183	1-136-158-00	FILM	0.027uF	5%	50V
C184	1-136-158-00	FILM	0.027uF	5%	50V
C185	1-136-163-00	FILM	0.068uF	5%	50V
C186	1-136-163-00	FILM	0.068uF	5%	50V
C188	1-162-286-31	CERAMIC	220PF	10%	50V
C201	1-162-282-31	CERAMIC (AEP, UK, IT)	100PF	10%	50V
C205	1-162-282-31	CERAMIC (AEP, UK, IT)	100PF	10%	50V
C240	1-162-282-31	CERAMIC	100PF	10%	50V (IT)
C290	1-162-282-31	CERAMIC	100PF	10%	50V (IT)
C494	1-161-379-00	CERAMIC (AEP, UK, IT)	0.01uF	20%	25V
C901	1-126-969-91	ELECT (US, Canadian)	220uF	20%	50V
C901	1-126-970-91	ELECT (AEP, UK, IT)	330uF	20%	50V
C902	1-124-478-11	ELECT	100uF	20%	25V

Ref. No.	Part No.	Description			Remark
C903	1-126-943-11	ELECT	2200uF	20%	25V
C904	1-126-943-11	ELECT	2200uF	20%	25V
C905	1-124-907-11	ELECT	10uF	20%	50V
C906	1-124-907-11	ELECT	10uF	20%	50V
C907	1-124-907-11	ELECT	10uF	20%	50V
C908	1-124-907-11	ELECT	10uF	20%	50V
C909	1-124-907-11	ELECT	10uF	20%	50V
C911	1-124-907-11	ELECT	10uF	20%	50V
C912	1-124-907-11	ELECT	10uF	20%	50V
C913	1-124-907-11	ELECT	10uF	20%	50V
C914	1-124-636-00	ELECT	3300uF	20%	25V
C915	1-124-636-00	ELECT	3300uF	20%	25V
C916	1-124-893-11	ELECT	2200uF	20%	10V
C917	1-124-893-11	ELECT	2200uF	20%	10V
C921	1-126-969-91	ELECT (US, Canadian)	220uF	20%	50V
C921	1-126-970-91	ELECT (AEP, UK, IT)	330uF	20%	50V
C922	1-126-101-11	ELECT	100uF	20%	16V
C923	1-124-907-11	ELECT	10uF	20%	50V
C924	1-124-927-11	ELECT	4.7uF	20%	100V
C928	1-124-477-11	ELECT	47uF	20%	25V
C930	1-164-159-11	CERAMIC	0.1uF		50V
C931	1-164-159-11	CERAMIC	0.1uF		50V

< CONNECTOR >

* CN101	1-566-859-11	SOCKET, CONNECTOR 15P	(SYSTEM CONTROL 1)
* CN103	1-569-624-11	SOCKET, CONNECTOR 17P	(SYSTEM CONTROL 2)
* CN104	1-568-832-11	SOCKET, CONNECTOR 13P	
* CN105	1-564-496-11	PIN, CONNECTOR 3P	
* CN106	1-564-506-11	PLUG, CONNECTOR 3P	
* CN108	1-568-834-11	SOCKET, CONNECTOR 15P	
* CN109	1-568-826-11	SOCKET, CONNECTOR 7P	
* CN110	1-695-649-11	CONNECTOR, BOARD TO BOARD 10P	
* CN111	1-568-455-11	PIN, CONNECTOR (PC BOARD) 10P	

< DIODE >

D115	8-719-987-63	DIODE	1N4148M
D116	8-719-987-63	DIODE	1N4148M
D901	8-719-200-82	DIODE	11ES2
D902	8-719-200-82	DIODE	11ES2
D903	8-719-200-82	DIODE	11ES2
D904	8-719-200-82	DIODE	11ES2
D905	8-719-200-82	DIODE	11ES2
D906	8-719-200-82	DIODE	11ES2
D907	8-719-910-25	DIODE	HZ12B2L
D908	8-719-987-63	DIODE	1N4148M
D909	8-719-200-82	DIODE	11ES2
D910	8-719-200-82	DIODE	11ES2

Ref. No.	Part No.	Description	Remark
D911	8-719-200-82	DIODE 11ES2	
D912	8-719-200-82	DIODE 11ES2	
D913	8-719-987-63	DIODE 1N4148M	
D914	8-719-987-63	DIODE 1N4148M	
D920	8-719-933-41	DIODE HZS6C3L	
D921	8-719-933-54	DIODE HZS9A2L	
		< FUSE >	
⚠F901	1-532-781-11	FUSE, MICRO 3.15A 125V (US, Canadian)	
⚠F901	1-532-844-21	LINK, IC (3.15A) (AEP, UK, IT)	
⚠F902	1-532-781-11	FUSE, MICRO 3.15A 125V (US, Canadian)	
⚠F902	1-532-844-21	LINK, IC (3.15A) (AEP, UK, IT)	
		< IC >	
IC101	8-759-805-14	IC LC7822	
IC104	8-759-603-14	IC M5229P	
IC105	8-759-081-01	IC NJU7305L	
IC106	8-759-603-14	IC M5229P	
IC110	8-759-634-50	IC M5218AL (AEP, UK, IT)	
IC901	8-759-602-66	IC M5230L-A	
IC902	8-759-231-53	IC TA7805S	
		< JACK >	
J101	1-565-320-61	JACK, PIN 6P (VIDEO IN, PHOTO IN, DAT IN/OUT)	
		< TRANSISTOR >	
Q107	8-729-900-61	TRANSISTOR DTA114ES	
Q108	8-729-224-62	TRANSISTOR 2SK246-GR	
Q109	8-729-900-80	TRANSISTOR DTC114ES	
Q901	8-729-209-15	TRANSISTOR 2SD2012	
Q903	8-729-900-80	TRANSISTOR DTC114ES	
Q904	8-729-209-15	TRANSISTOR 2SD2012	
Q907	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q908	8-729-209-15	TRANSISTOR 2SD2012	
Q909	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q910	8-729-900-80	TRANSISTOR DTC114ES	
Q911	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q912	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q913	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q929	8-729-900-61	TRANSISTOR DTA114ES	
Q930	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R101	1-249-437-11	CARBON 47K 5% 1/4W	
R102	1-249-437-11	CARBON 47K 5% 1/4W	
R103	1-249-432-11	CARBON 18K 5% 1/4W	
R104	1-249-437-11	CARBON 47K 5% 1/4W	
R105	1-249-417-11	CARBON (AEP, UK, IT) 1K 5% 1/4W	F
R106	1-249-417-11	CARBON (AEP, UK, IT) 1K 5% 1/4W	F
R107	1-247-897-11	CARBON (AEP, UK, IT) 560K 5% 1/4W	
R108	1-249-437-11	CARBON (AEP, UK, IT) 47K 5% 1/4W	
R110	1-249-430-11	CARBON (AEP, UK, IT) 12K 5% 1/4W	
R111	1-247-883-00	CARBON 150K 5% 1/4W	
R112	1-249-437-11	CARBON 47K 5% 1/4W	
R113	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R114	1-249-423-11	CARBON 3.3K 5% 1/4W	F
R115	1-249-437-11	CARBON 47K 5% 1/4W	
R120	1-249-417-11	CARBON 1K 5% 1/4W	F
R121	1-249-417-11	CARBON 1K 5% 1/4W	F
R122	1-249-417-11	CARBON 1K 5% 1/4W	F
R125	1-247-887-00	CARBON 220K 5% 1/4W	
R126	1-247-887-00	CARBON 220K 5% 1/4W	
R127	1-249-417-11	CARBON 1K 5% 1/4W	F
R128	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R129	1-247-903-00	CARBON 1M 5% 1/4W	
R130	1-247-903-00	CARBON 1M 5% 1/4W	
R131	1-247-903-00	CARBON 1M 5% 1/4W	
R132	1-247-903-00	CARBON 1M 5% 1/4W	
R133	1-247-903-00	CARBON 1M 5% 1/4W	
R134	1-247-903-00	CARBON 1M 5% 1/4W	
R135	1-247-903-00	CARBON 1M 5% 1/4W	
R136	1-247-895-00	CARBON 470K 5% 1/4W	
R137	1-249-417-11	CARBON 1K 5% 1/4W	F
R151	1-249-437-11	CARBON 47K 5% 1/4W	
R152	1-249-437-11	CARBON 47K 5% 1/4W	
R153	1-249-432-11	CARBON 18K 5% 1/4W	
R154	1-249-437-11	CARBON 47K 5% 1/4W	
R155	1-249-417-11	CARBON (AEP, UK, IT) 1K 5% 1/4W	F
R156	1-249-417-11	CARBON (AEP, UK, IT) 1K 5% 1/4W	F
R157	1-247-897-11	CARBON (AEP, UK, IT) 560K 5% 1/4W	
R158	1-249-437-11	CARBON (AEP, UK, IT) 47K 5% 1/4W	
R160	1-249-430-11	CARBON (AEP, UK, IT) 12K 5% 1/4W	
R161	1-249-417-11	CARBON 1K 5% 1/4W	F
R162	1-249-417-11	CARBON 1K 5% 1/4W	F
R175	1-247-887-00	CARBON 220K 5% 1/4W	
R176	1-247-887-00	CARBON 220K 5% 1/4W	
R177	1-249-417-11	CARBON 1K 5% 1/4W	F

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MAIN **MD-A**

Ref. No.	Part No.	Description				Remark
R178	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R179	1-247-903-00	CARBON	1M	5%	1/4W	
R180	1-247-903-00	CARBON	1M	5%	1/4W	
R181	1-247-903-00	CARBON	1M	5%	1/4W	
R182	1-247-903-00	CARBON	1M	5%	1/4W	
R183	1-247-903-00	CARBON	1M	5%	1/4W	
R184	1-247-903-00	CARBON	1M	5%	1/4W	
R185	1-247-903-00	CARBON	1M	5%	1/4W	
R186	1-247-895-00	CARBON	470K	5%	1/4W	
R187	1-249-417-11	CARBON	1K	5%	1/4W	F
R201	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R202	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R203	1-249-437-11	CARBON (AEP, UK, IT)	47K	5%	1/4W	
R204	1-249-437-11	CARBON (AEP, UK, IT)	47K	5%	1/4W	
R205	1-249-432-11	CARBON	18K	5%	1/4W	
R207	1-249-425-11	CARBON (US, Canadian)	4.7K	5%	1/4W	F
R207	1-249-417-11	CARBON (AEP, UK, IT)	1K	5%	1/4W	F
R208	1-249-425-11	CARBON (US, Canadian)	4.7K	5%	1/4W	F
R208	1-249-417-11	CARBON (AEP, UK, IT)	1K	5%	1/4W	F
R209	1-249-437-11	CARBON	47K	5%	1/4W	
R210	1-249-437-11	CARBON	47K	5%	1/4W	
R211	1-249-437-11	CARBON	47K	5%	1/4W	
R212	1-249-437-11	CARBON	47K	5%	1/4W	
R213	1-249-437-11	CARBON	47K	5%	1/4W	
R214	1-249-437-11	CARBON	47K	5%	1/4W	
R221	1-249-417-11	CARBON	1K	5%	1/4W	F
R223	1-249-417-11	CARBON	1K	5%	1/4W	F
R255	1-249-432-11	CARBON	18K	5%	1/4W	
R902	1-249-413-11	CARBON	470	5%	1/4W	F
R903	1-247-903-00	CARBON	1M	5%	1/4W	
R904	1-249-413-11	CARBON	470	5%	1/4W	F
R905	1-249-431-11	CARBON	15K	5%	1/4W	
R906	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R907	1-249-431-11	CARBON	15K	5%	1/4W	
R908	1-249-431-11	CARBON	15K	5%	1/4W	
⚠R920	1-212-857-00	FUSIBLE	10	5%	1/4W	F
⚠R921	1-212-974-00	FUSIBLE	47	5%	1/2W	F
R923	1-249-413-11	CARBON	470	5%	1/4W	F
R924	1-249-441-11	CARBON	100K	5%	1/4W	
R925	1-249-433-11	CARBON	22K	5%	1/4W	
R928	1-249-429-11	CARBON	10K	5%	1/4W	
R929	1-249-429-11	CARBON	10K	5%	1/4W	
R930	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R932	1-219-138-91	FUSIBLE	0.47	10%	1/4W	F
⚠R933	1-219-138-91	FUSIBLE	0.47	10%	1/4W	F
R940	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R941	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R948	1-249-413-11	CARBON	470	5%	1/4W	F
R949	1-249-441-11	CARBON	100K	5%	1/4W	
⚠R990	1-219-138-21	FUSIBLE	0.47	10%	1/4W	F
		< TEST PIN >				
* TP101	1-565-835-11	SOCKET, CONNECTOR 3P				
**********						
*	A-2006-399-A	MD-A BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C12	1-136-157-00	FILM	0.022uF	5%	50V	
C13	1-124-234-00	ELECT	22uF	20%	16V	
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	
C22	1-136-157-00	FILM	0.022uF	5%	50V	
C23	1-124-234-00	ELECT	22uF	20%	16V	
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C31	1-124-234-00	ELECT	22uF	20%	16V	
C32	1-124-234-00	ELECT	22uF	20%	16V	
C71	1-124-499-11	ELECT, NONPOLAR R	1uF	20%	50V	
		< CONNECTOR >				
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD				
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P				
* CNP32	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P				
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P				
		< IC >				
IC31A	8-759-106-02	IC uPC4570G2				
		< JUMPER RESISTOR >				
JW1	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW51	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W	
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W	
		< TRANSISTOR >				
Q71A	8-729-602-36	TRANSISTOR 2SA1602-F				
		< RESISTOR >				
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W	

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Ref. No.	Part No.	Description			Remark
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11A	1-241-627-11	RES, ADJ, CARBON 1K			
RV21A	1-241-627-11	RES, ADJ, CARBON 1K			
RV71A	1-241-630-11	RES, ADJ, CARBON 10K			
RV72A	1-241-630-11	RES, ADJ, CARBON 10K			
**********					
*	A-2006-400-A	MD-B BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C11	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C12	1-136-157-00	FILM	0.022uF	5%	50V
C13	1-124-234-00	ELECT	22uF	20%	16V
C14	1-136-273-91	FILM	75PF	5%	630V
C15	1-164-080-11	CERAMIC	390PF	10%	50V
C17	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-136-157-00	FILM	0.022uF	5%	50V
C23	1-124-234-00	ELECT	22uF	20%	16V
C24	1-136-273-91	FILM	75PF	5%	630V
C25	1-164-080-11	CERAMIC	390PF	10%	50V
C27	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C28	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C31	1-124-234-00	ELECT	22uF	20%	16V
C32	1-124-234-00	ELECT	22uF	20%	16V
C33	1-124-234-00	ELECT	22uF	20%	16V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C53	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V
C54	1-136-559-11	FILM	0.0047uF	5%	630V
C56	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C57	1-164-346-11	CERAMIC CHIP	1uF		16V
C58	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C71	1-124-499-11	ELECT, NONPOLAR R	1uF	20%	50V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CNJ31	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ33	1-580-782-11	CONNECTOR, BOARD TO BOARD			
* CNJ72	1-580-411-11	SOCKET, CONNECTOR 4P			
* CNP32	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P			
* CNP71	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< DIODE >			
D31	8-719-016-74	DIODE 1SS352			
		< IC >			
IC31B	8-759-106-02	IC uPC4570G2			
		< JUMPER RESISTOR >			
JW1	1-216-296-00	METAL CHIP	0	5%	1/8W
JW2	1-216-295-00	METAL CHIP	0	5%	1/10W
JW3	1-216-295-00	METAL CHIP	0	5%	1/10W
JW4	1-216-295-00	METAL CHIP	0	5%	1/10W
JW6	1-216-295-00	METAL CHIP	0	5%	1/10W
JW7	1-216-295-00	METAL CHIP	0	5%	1/10W
JW52	1-216-296-00	METAL CHIP	0	5%	1/8W
JW53	1-216-296-00	METAL CHIP	0	5%	1/8W
JW54	1-216-296-00	METAL CHIP	0	5%	1/8W
JW55	1-216-296-00	METAL CHIP	0	5%	1/8W
JW56	1-216-296-00	METAL CHIP	0	5%	1/8W
JW57	1-216-296-00	METAL CHIP	0	5%	1/8W
JW58	1-216-296-00	METAL CHIP	0	5%	1/8W
JW59	1-216-296-00	METAL CHIP	0	5%	1/8W
JW60	1-216-296-00	METAL CHIP	0	5%	1/8W
JW61	1-216-296-00	METAL CHIP	0	5%	1/8W
		< COIL >			
L11	1-410-780-11	INDUCTOR	27mH		
L21	1-410-780-11	INDUCTOR	27mH		
		< TRANSISTOR >			
Q51	8-729-808-01	TRANSISTOR	2SD1622-S		
Q52	8-729-808-01	TRANSISTOR	2SD1622-S		
Q53	8-729-808-01	TRANSISTOR	2SD1622-S		
Q71B	8-729-602-36	TRANSISTOR	2SA1602-F		
		< RESISTOR >			
R11	1-216-099-00	METAL CHIP	120K	5%	1/10W
R12	1-216-025-00	METAL CHIP	100	5%	1/10W
R13	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R14	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
⚠R15	1-249-430-11	CARBON	12K	5%	1/4W F

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

MD-B POWER AMP

Ref. No.	Part No.	Description			Remark
R21	1-216-099-00	METAL CHIP	120K	5%	1/10W
R22	1-216-025-00	METAL CHIP	100	5%	1/10W
R23	1-216-100-00	METAL GLAZE	130K	5%	1/10W
R24	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
⚠R25	1-249-430-11	CARBON	12K	5%	1/4W F
R31	1-216-033-00	METAL CHIP	220	5%	1/10W
R32	1-216-033-00	METAL CHIP	220	5%	1/10W
⚠R41	1-249-393-11	CARBON	10	5%	1/4W F
⚠R42	1-249-393-11	CARBON	10	5%	1/4W F
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-075-00	METAL CHIP	12K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R55	1-216-309-00	METAL CHIP	5.6	5%	1/10W
R56	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R71	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R72	1-216-081-00	METAL CHIP	22K	5%	1/10W
R73	1-216-089-00	METAL CHIP	47K	5%	1/10W
R74	1-216-089-00	METAL CHIP	47K	5%	1/10W
		< VARIABLE RESISTOR >			
RV11B	1-241-627-11	RES, ADJ, CARBON 1K			
RV12B	1-238-551-11	RES, ADJ, CARBON 220K			
RV21	1-241-627-11	RES, ADJ, CARBON 1K			
RV22	1-238-551-11	RES, ADJ, CARBON 220K			
RV71B	1-241-630-11	RES, ADJ, CARBON 10K			
RV72B	1-241-630-11	RES, ADJ, CARBON 10K			
		< RELAY >			
RY31	1-515-726-11	RELAY			
		< TRANSFORMER >			
T51	1-406-419-11	COIL, BIAS OSCILLATION			
**********					
*	A-4356-149-A	POWER AMP BOARD, COMPLETE (IT)			
*	A-4356-167-A	POWER AMP BOARD, COMPLETE (US, Canadian)			
*	A-4356-170-A	POWER AMP BOARD, COMPLETE (AEP, UK)			
		**********			
		< CAPACITOR >			
C702	1-126-176-11	ELECT	220uF	20%	10V
C704	1-161-379-00	CERAMIC	0.01uF	20%	25V
C706	1-124-927-11	ELECT	4.7uF	20%	100V
C707	1-124-478-11	ELECT	100uF	20%	25V
C708	1-124-907-11	ELECT	10uF	20%	50V
C709	1-164-159-11	CERAMIC	0.1uF		50V
C710	1-124-910-11	ELECT	47uF	20%	50V
C711	1-164-159-11	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description			Remark
C712	1-164-159-11	CERAMIC	0.1uF		50V
C801	1-124-927-11	ELECT	4.7uF	20%	100V
C802	1-162-282-31	CERAMIC	100PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-124-927-11	ELECT	4.7uF	20%	100V
C806	1-136-165-00	FILM	0.1uF	5%	50V
C807	1-136-165-00	FILM	0.1uF	5%	50V
C808	1-136-165-00	FILM	0.1uF	5%	50V
C809	1-136-165-00	FILM	0.1uF	5%	50V
C811	1-161-379-00	CERAMIC	0.01uF	20%	25V
C821	1-124-927-11	ELECT	4.7uF	20%	100V
C822	1-162-282-31	CERAMIC	100PF	10%	50V
C823	1-162-282-31	CERAMIC	100PF	10%	50V
C824	1-124-927-11	ELECT	4.7uF	20%	100V
C828	1-136-165-00	FILM	0.1uF	5%	50V
C829	1-136-165-00	FILM	0.1uF	5%	50V
C831	1-161-379-00	CERAMIC	0.01uF	20%	25V
C851	1-124-927-11	ELECT	4.7uF	20%	100V
C852	1-162-282-31	CERAMIC	100PF	10%	50V
C853	1-162-282-31	CERAMIC	100PF	10%	50V
C854	1-124-927-11	ELECT	4.7uF	20%	100V
C856	1-136-165-00	FILM	0.1uF	5%	50V
C857	1-136-165-00	FILM	0.1uF	5%	50V
C858	1-136-165-00	FILM	0.1uF	5%	50V
C859	1-136-165-00	FILM	0.1uF	5%	50V
C861	1-161-379-00	CERAMIC	0.01uF	20%	25V
C871	1-124-927-11	ELECT	4.7uF	20%	100V
C872	1-162-282-31	CERAMIC	100PF	10%	50V
C873	1-162-282-31	CERAMIC	100PF	10%	50V
C874	1-124-927-11	ELECT	4.7uF	20%	100V
C878	1-136-165-00	FILM	0.1uF	5%	50V
C879	1-136-165-00	FILM	0.1uF	5%	50V
C881	1-161-379-00	CERAMIC	0.01uF	20%	25V
		< CONNECTOR >			
* CN801	1-564-510-11	PLUG, CONNECTOR 7P			
* CN802	1-564-507-11	PLUG, CONNECTOR 4P			
* CN803	1-564-509-11	PLUG, CONNECTOR 6P			
* CN804	1-564-508-11	PLUG, CONNECTOR 5P			
		< DIODE >			
D703	8-719-987-63	DIODE	1N4148M		
D704	8-719-987-63	DIODE	1N4148M		
D705	8-719-987-63	DIODE	1N4148M		
D706	8-719-987-63	DIODE	1N4148M		
D801	8-719-987-63	DIODE	1N4148M		
D802	8-719-987-63	DIODE	1N4148M		
D821	8-719-987-63	DIODE	1N4148M		
D822	8-719-987-63	DIODE	1N4148M		

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POWER AMP

Ref. No.	Part No.	Description				Remark
D851	8-719-987-63	DIODE	1N4148M			
D852	8-719-987-63	DIODE	1N4148M			
D871	8-719-987-63	DIODE	1N4148M			
D872	8-719-987-63	DIODE	1N4148M			
		< IC >				
IC701	8-759-111-68	IC	uPC1237HA			
IC702	8-759-987-16	IC	LM393P			
IC703	8-759-947-34	IC	LM35DZ			
IC801	8-759-085-89	IC	LM3875-S			
IC821	8-759-085-89	IC	LM3875-S			
IC851	8-759-085-89	IC	LM3875-S			
IC871	8-759-085-89	IC	LM3875-S			
		< COIL >				
* L801	1-420-872-00	COIL, AIR CORE				
* L821	1-420-872-00	COIL, AIR CORE				
* L851	1-420-872-00	COIL, AIR CORE				
* L871	1-420-872-00	COIL, AIR CORE				
		< TRANSISTOR >				
Q701	8-729-119-77	TRANSISTOR	2SA1175-FEK			
Q801	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
Q821	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
Q851	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
Q871	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA			
		< RESISTOR >				
R701	1-249-433-11	CARBON	22K	5%	1/4W	
R702	1-249-441-11	CARBON	100K	5%	1/4W	
R703	1-249-433-11	CARBON	22K	5%	1/4W	
R704	1-249-433-11	CARBON	22K	5%	1/4W	
R705	1-249-429-11	CARBON	10K	5%	1/4W	
R706	1-249-417-11	CARBON	1K	5%	1/4W	F
R707	1-249-429-11	CARBON	10K	5%	1/4W	
R708	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R709	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R710	1-249-429-11	CARBON	10K	5%	1/4W	
R711	1-249-417-11	CARBON	1K	5%	1/4W	F
R712	1-249-437-11	CARBON	47K	5%	1/4W	
R713	1-249-441-11	CARBON	100K	5%	1/4W	
R714	1-249-417-11	CARBON	1K	5%	1/4W	F
R715	1-249-393-11	CARBON	10	5%	1/4W	F
R801	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R802	1-249-437-11	CARBON	47K	5%	1/4W	
R803	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R804	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R805	1-217-151-00	RES, METAL PLATE			0.22	
R806	1-249-417-11	CARBON	1K	5%	1/4W	F

Ref. No.	Part No.	Description				Remark
R807	1-249-431-11	CARBON	15K	5%	1/4W	
R808	1-249-441-11	CARBON	100K	5%	1/4W	
R809	1-247-688-11	CARBON	10	5%	1/4W	
R810	1-249-439-11	CARBON	68K	5%	1/4W	
R811	1-249-429-11	CARBON	10K	5%	1/4W	
R821	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R822	1-249-438-11	CARBON	56K	5%	1/4W	
R823	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R824	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R825	1-217-151-00	RES, METAL PLATE			0.22	
R826	1-249-417-11	CARBON	1K	5%	1/4W	F
R827	1-249-431-11	CARBON	15K	5%	1/4W	
R828	1-249-441-11	CARBON	100K	5%	1/4W	
R829	1-247-688-11	CARBON	10	5%	1/4W	
R830	1-249-437-11	CARBON	47K	5%	1/4W	
R831	1-249-429-11	CARBON	10K	5%	1/4W	
R851	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R852	1-249-437-11	CARBON	47K	5%	1/4W	
R853	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R854	1-249-437-11	CARBON	47K	5%	1/4W	
⚠R855	1-217-151-00	RES, METAL PLATE			0.22	
R856	1-249-417-11	CARBON	1K	5%	1/4W	F
R857	1-249-431-11	CARBON	15K	5%	1/4W	
R858	1-249-441-11	CARBON	100K	5%	1/4W	
R859	1-247-688-11	CARBON	10	5%	1/4W	
R860	1-249-438-11	CARBON	56K	5%	1/4W	
R861	1-249-429-11	CARBON	10K	5%	1/4W	
R871	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R872	1-249-438-11	CARBON	56K	5%	1/4W	
R873	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R874	1-249-438-11	CARBON	56K	5%	1/4W	
⚠R875	1-217-151-00	RES, METAL PLATE			0.22	
R876	1-249-417-11	CARBON	1K	5%	1/4W	F
R877	1-249-431-11	CARBON	15K	5%	1/4W	
R878	1-249-441-11	CARBON	100K	5%	1/4W	
R879	1-247-688-11	CARBON	10	5%	1/4W	
R880	1-249-436-11	CARBON	39K	5%	1/4W	
R881	1-249-429-11	CARBON	10K	5%	1/4W	

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POWER

Ref. No.	Part No.	Description			Remark
*	A-4356-165-A	POWER BOARD, COMPLETE (US)			
*	A-4356-168-A	POWER BOARD, COMPLETE (AEP)			
*	A-4356-171-A	POWER BOARD, COMPLETE (UK)			
*	A-4356-490-A	POWER BOARD, COMPLETE (Canadian)			
*	A-4356-558-A	POWER BOARD, COMPLETE (IT)			
		**********			
*	1-533-213-31	HOLDER, FUSE			
		< CAPACITOR >			
C918	1-124-628-11	ELECT	220uF	20%	100V
C919	1-124-628-11	ELECT	220uF	20%	100V
C920	1-123-605-00	ELECT	100uF	20%	100V
C921	1-123-605-00	ELECT	100uF	20%	100V
C922	1-124-907-11	ELECT	10uF	20%	50V
C923	1-124-907-11	ELECT	10uF	20%	50V
C924	1-164-159-11	CERAMIC	0.1uF		50V
C925	1-164-159-11	CERAMIC	0.1uF		50V
C951	1-136-153-00	FILM	0.01uF	5%	50V (IT)
C952	1-136-153-00	FILM	0.01uF	5%	50V (IT)
C953	1-126-224-11	ELECT	4700uF	20%	42V
C954	1-126-224-11	ELECT	4700uF	20%	42V
C955	1-136-171-00	FILM	0.33uF	5%	50V
C956	1-136-171-00	FILM	0.33uF	5%	50V
C961	1-136-153-00	FILM	0.01uF	5%	50V (IT)
C962	1-136-153-00	FILM	0.01uF	5%	50V (IT)
		< CONNECTOR >			
* CN952	1-564-505-11	PLUG, CONNECTOR 2P			
* CN953	1-568-826-11	SOCKET, CONNECTOR 7P			
* CN954	1-564-337-00	PIN, CONNECTOR 3P			
* CN958	1-564-510-11	PLUG, CONNECTOR 7P			
* CN960	1-564-321-00	PIN, CONNECTOR 2P			
		< DIODE >			
D914	8-719-200-82	DIODE	11ES2		
D915	8-719-200-82	DIODE	11ES2		
D916	8-719-200-82	DIODE	11ES2		
D917	8-719-200-82	DIODE	11ES2		
D918	8-719-002-73	DIODE	UZL-36M		
D919	8-719-934-22	DIODE	HZS30-2L (US, AEP, UK, IT)		
D919	8-719-934-18	DIODE	HZS27-2L (Canadian)		
D920	8-719-014-80	DIODE	UZP-6.2BC		
D921	8-719-014-80	DIODE	UZP-6.2BC		
D951	8-719-987-63	DIODE	1N4148M		
D952	8-719-987-63	DIODE	1N4148M		
D953	8-719-302-38	DIODE	RBV-602-01		
D954	8-719-987-63	DIODE	1N4148M		
D955	8-719-987-63	DIODE	1N4148M		
D956	8-719-987-63	DIODE	1N4148M		

Ref. No.	Part No.	Description				Remark
		< AC INLET >				
⚠J951	1-526-930-11	INLET, AC (~ AC IN) (US, Canadian)				
⚠J951	1-526-931-11	INLET, AC (~ AC IN) (AEP, UK, IT)				
* J953	1-565-352-91	JACK, PIN 2P (SURROUND SPEAKER) (UK)				
		< COIL >				
⚠L901	1-424-485-11	FILTER, LINE (AEP, UK, IT)				
		< TRANSISTOR >				
Q910	8-729-188-23	TRANSISTOR	2SD882-P			
Q911	8-729-177-22	TRANSISTOR	2SB772-Q			
Q951	8-729-111-29	TRANSISTOR	2SD1616A-K			
Q952	8-729-801-84	TRANSISTOR	2SB1013-4			
Q953	8-729-119-76	TRANSISTOR	2SA1175-HFE			
		< RESISTOR >				
R901	1-202-725-00	SOLID (US, Canadian)	3.3M	10%	1/2W	
⚠R912	1-215-868-00	METAL OXIDE	680	5%	1W	F
⚠R913	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R914	1-249-429-11	CARBON	10K	5%	1/4W	
R915	1-249-429-11	CARBON	10K	5%	1/4W	
R916	1-249-434-11	CARBON	27K	5%	1/4W	
R917	1-247-895-00	CARBON	470K	5%	1/4W	
R918	1-247-895-00	CARBON	470K	5%	1/4W	
R951	1-247-727-11	CARBON	10	5%	1/2W	F (IT)
R952	1-247-727-11	CARBON	10	5%	1/2W	F (IT)
⚠R953	1-247-741-11	CARBON	150	5%	1/2W	F
R954	1-249-429-11	CARBON	10K	5%	1/4W	
R955	1-249-441-11	CARBON	100K	5%	1/4W	
R956	1-249-429-11	CARBON	10K	5%	1/4W	
R957	1-249-429-11	CARBON	10K	5%	1/4W	
R958	1-249-429-11	CARBON	10K	5%	1/4W	
R959	1-249-429-11	CARBON	10K	5%	1/4W	
R960	1-249-429-11	CARBON	10K	5%	1/4W	
R961	1-247-727-11	CARBON	10	5%	1/2W	F (IT)
R962	1-247-727-11	CARBON	10	5%	1/2W	F (IT)
⚠R991	1-219-123-91	FUSIBLE	0.47	5%	1/4W	F
		< RELAY >				
RY951	1-515-790-11	RELAY				
RY952	1-515-790-11	RELAY				
RY953	1-515-626-11	RELAY				
		< TERMINAL >				
TB951	1-536-706-41	TERMINAL BOARD (SP) (SPEAKER)				

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SW-A SW-B TA PANEL

Ref. No.	Part No.	Description				Remark
*	1-634-841-14	SW-A BOARD				
		**********				
	3-343-419-01	HOLDER (S SENSER A)				
		< CONNECTOR >				
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P				
		< IC >				
IC81A	8-719-710-03	DIODE NJL5165K-B				
		< RESISTOR >				
R84	1-249-417-11	CARBON	1K	5%	1/4W	F
R85	1-249-408-11	CARBON	180	5%	1/4W	F
		< SWITCH >				
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)				
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)				
S86	1-571-281-21	SWITCH, LEAF (HALF DET)				
**********						
*	1-634-841-14	SW-B BOARD				
		**********				
	3-343-419-01	HOLDER (S SENSER A)				
		< CONNECTOR >				
* CNP81	1-568-852-11	SOCKET, CONNECTOR 9P				
		< IC >				
IC81B	8-719-710-03	DIODE NJL5165K-B				
		< RESISTOR >				
R81	1-249-414-11	CARBON	560	5%	1/4W	F
R82	1-247-818-11	CARBON	300	5%	1/4W	
R83	1-247-834-11	CARBON	1.3K	5%	1/4W	
R84	1-249-417-11	CARBON	1K	5%	1/4W	F
R85	1-249-408-11	CARBON	180	5%	1/4W	F
		< SWITCH >				
S81	1-571-958-11	SWITCH, PUSH (1 KEY) (STOP DET)				
S82	1-571-281-21	SWITCH, LEAF (CrO2 DET)				
S83	1-571-281-21	SWITCH, LEAF (METAL DET)				
S84	1-571-281-21	SWITCH, LEAF (ERASE PROOF SIDE A)				
S85	1-571-281-21	SWITCH, LEAF (ERASE PROOF SIDE B)				
S86	1-571-281-21	SWITCH, LEAF (HALF DET)				
**********						

Ref. No.	Part No.	Description				Remark
*	A-4356-151-A	TA PANEL BOARD, COMPLETE (IT)				
*	A-4356-175-A	TA PANEL BOARD, COMPLETE (US, Canadian)				
*	A-4356-179-A	TA PANEL BOARD, COMPLETE (AEP, UK)				
		**********				
*	4-921-941-01	CUSHION (FL)				
*	4-953-602-01	HOLDER (FL TUBE)				
		< CAPACITOR >				
C522	1-164-159-11	CERAMIC	0.1uF		50V	
C523	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
* CN521	1-568-858-11	SOCKET, CONNECTOR 15P				
		< DIODE >				
D520	8-719-301-37	LED SEL2210S-CD (DIRECT)				
D521	8-719-301-37	LED SEL2210S-CD (PHOTO/TUNER)				
D522	8-719-301-37	LED SEL2210S-CD (TUNER/CD)				
D523	8-719-301-37	LED SEL2210S-CD (CD/DAT)				
D524	8-719-301-37	LED SEL2210S-CD (DAT/TAPE)				
D525	8-719-301-37	LED SEL2210S-CD (TAPE/VIDEO)				
D526	8-719-301-37	LED SEL2210S-CD (ON STANDBY)				
		< FLUORESCENT INDICATOR >				
FL521	1-519-735-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC551	8-759-075-35	IC TD62C950RF				
		< RESISTOR >				
R520	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R521	1-249-413-11	CARBON	470	5%	1/4W	F
R522	1-249-415-11	CARBON	680	5%	1/4W	F
R523	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R524	1-249-413-11	CARBON	470	5%	1/4W	F
R525	1-249-415-11	CARBON	680	5%	1/4W	F
R526	1-249-417-11	CARBON	1K	5%	1/4W	F
R527	1-249-414-11	CARBON	560	5%	1/4W	F
R528	1-249-414-11	CARBON	560	5%	1/4W	F
R550	1-249-417-11	CARBON	1K	5%	1/4W	F
R551	1-249-417-11	CARBON	1K	5%	1/4W	F
R552	1-249-417-11	CARBON	1K	5%	1/4W	F
R553	1-249-417-11	CARBON	1K	5%	1/4W	F
R554	1-249-437-11	CARBON	47K	5%	1/4W	
		< SWITCH >				
S520	1-554-303-21	SWITCH, TACTILE (SYSTEM POWER)				

TA PANEL | TC MAIN

Ref. No.	Part No.	Description			Remark
S521	1-554-303-21	SWITCH, TACTILE (DISPLAY)			
S522	1-554-303-21	SWITCH, TACTILE (DIRECT)			
S523	1-554-303-21	SWITCH, TACTILE (FUNCTION)			
S524	1-554-303-21	SWITCH, TACTILE (+)			
S525	1-554-303-21	SWITCH, TACTILE (PRESET)			
S526	1-554-303-21	SWITCH, TACTILE (-)			
**********					
*	A-4356-155-A	TC MAIN BOARD, COMPLETE (IT)			
*	A-4356-183-A	TC MAIN BOARD, COMPLETE (US, Canadian, AEP, UK)			
		**********			
		< CAPACITOR >			
C105	1-106-351-00	MYLAR	2200PF	5%	200V
C106	1-106-351-00	MYLAR	2200PF	5%	200V
C107	1-136-174-00	FILM	0.56uF	5%	50V
C108	1-136-171-00	FILM	0.33uF	5%	50V
C201	1-136-158-00	FILM	0.027uF	5%	50V
C202	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C204	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C205	1-124-925-11	ELECT	2.2uF	20%	100V
C206	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C207	1-126-157-11	ELECT	10uF	20%	16V
C208	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C209	1-126-301-11	ELECT	1uF	20%	50V
C215	1-106-351-00	MYLAR	2200PF	5%	200V
C216	1-106-351-00	MYLAR	2200PF	5%	200V
C217	1-136-174-00	FILM	0.56uF	5%	50V
C218	1-136-171-00	FILM	0.33uF	5%	50V
C301	1-136-158-00	FILM	0.027uF	5%	50V
C302	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C304	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C305	1-124-925-11	ELECT	2.2uF	20%	100V
C306	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C307	1-126-157-11	ELECT	10uF	20%	16V
C308	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C309	1-126-301-11	ELECT	1uF	20%	50V
C401	1-124-443-00	ELECT	100uF	20%	10V
C402	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C403	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C404	1-124-473-11	ELECT	1000uF	20%	10V
C405	1-124-443-00	ELECT	100uF	20%	10V
C407	1-124-925-11	ELECT	2.2uF	20%	100V
C408	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C409	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C410	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C411	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C415	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C416	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C417	1-124-907-11	ELECT	10uF	20%	50V
C419	1-124-473-11	ELECT	1000uF	20%	10V
C420	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C421	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C422	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C424	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C425	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C426	1-124-478-11	ELECT	100uF	20%	25V
C427	1-124-478-11	ELECT	100uF	20%	25V
C428	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C440	1-124-473-11	ELECT	1000uF	20%	10V
C501	1-124-443-00	ELECT	100uF	20%	10V
C502	1-124-443-00	ELECT	100uF	20%	10V
C4001	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C4002	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C4003	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C6500	1-124-261-00	ELECT	10uF	20%	50V
		< CONNECTOR >			
CN601	1-573-101-11	SOCKET, CONNECTOR 9P			
CN602	1-580-783-11	CONNECTOR, BOARD TO BOARD			
CN603	1-573-101-11	SOCKET, CONNECTOR 9P			
CN604	1-580-783-11	CONNECTOR, BOARD TO BOARD			
* CN605	1-580-476-11	SOCKET, CONNECTOR 15P			
CN607	1-580-783-11	CONNECTOR, BOARD TO BOARD			
* CN609	1-568-856-11	SOCKET, CONNECTOR 13P			
		< DIODE >			
D401	8-719-210-33	DIODE	EC10DS2		
D404	8-719-021-41	DIODE	UZM5.6X		
D407	8-719-801-78	DIODE	1SS184		
D410	8-719-801-78	DIODE	1SS184		
D411	8-719-801-78	DIODE	1SS184		
D412	8-719-801-78	DIODE	1SS184		
D416	8-719-801-78	DIODE	1SS184		
D4001	8-719-801-78	DIODE	1SS184		
		< IC >			
IC201	8-759-516-43	IC	CD4053BCM		
IC202	8-752-037-90	IC	CXA1331M		
IC203	8-759-996-43	IC	RC4558PS		
IC204	8-759-516-47	IC	CD4066BCM		
IC205	8-752-055-60	IC	CXA1578M		
IC401	8-759-076-36	IC	M50964-256FP		
IC402	8-759-207-05	IC	TA7272P		
IC403	8-759-996-43	IC	RC4558PS		
IC404	8-759-925-85	IC	SN74HC32ANS		
IC405	8-759-520-90	IC	PST572E		

Ref. No.	Part No.	Description			Remark
IC406	8-759-516-41	IC CD4052BCM			
		< COIL >			
L403	1-410-482-31	INDUCTOR	100uH		
L404	1-410-482-31	INDUCTOR	100uH		
		< TRANSISTOR >			
Q201	8-729-207-56	TRANSISTOR	RN1402		
Q202	8-729-602-21	TRANSISTOR	2SC4154-F		
Q301	8-729-207-56	TRANSISTOR	RN1402		
Q302	8-729-602-21	TRANSISTOR	2SC4154-F		
Q401	8-729-804-41	TRANSISTOR	2SB1122-S		
Q402	8-729-804-41	TRANSISTOR	2SB1122-S		
Q403	8-729-207-68	TRANSISTOR	RN2402		
Q404	8-729-207-56	TRANSISTOR	RN1402		
Q405	8-729-207-68	TRANSISTOR	RN2402		
Q407	8-729-207-68	TRANSISTOR	RN2402		
Q408	8-729-207-56	TRANSISTOR	RN1402		
Q409	8-729-207-68	TRANSISTOR	RN2402		
Q410	8-729-901-06	TRANSISTOR	DTA144EK		
Q411	8-729-207-56	TRANSISTOR	RN1402		
Q412	8-729-207-68	TRANSISTOR	RN2402		
Q414	8-729-207-68	TRANSISTOR	RN2402		
Q415	8-729-207-68	TRANSISTOR	RN2402		
Q501	8-729-901-06	TRANSISTOR	DTA144EK		
		< RESISTOR >			
R108	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R109	1-216-043-00	METAL CHIP	560	5%	1/10W
R110	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R201	1-216-089-00	METAL CHIP	47K	5%	1/10W
R202	1-216-089-00	METAL CHIP	47K	5%	1/10W
R203	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R204	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R205	1-216-105-00	METAL CHIP	220K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-049-00	METAL CHIP	1K	5%	1/10W
R208	1-216-089-00	METAL CHIP	47K	5%	1/10W
R209	1-216-097-00	METAL CHIP	100K	5%	1/10W
R210	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R211	1-216-025-00	METAL CHIP	100	5%	1/10W
R212	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R214	1-216-089-00	METAL CHIP	47K	5%	1/10W
R215	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R218	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R219	1-216-043-00	METAL CHIP	560	5%	1/10W
R220	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R301	1-216-089-00	METAL CHIP	47K	5%	1/10W
R302	1-216-089-00	METAL CHIP	47K	5%	1/10W
R303	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R304	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R305	1-216-105-00	METAL CHIP	220K	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-049-00	METAL CHIP	1K	5%	1/10W
R308	1-216-089-00	METAL CHIP	47K	5%	1/10W
R309	1-216-097-00	METAL CHIP	100K	5%	1/10W
R310	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R311	1-216-025-00	METAL CHIP	100	5%	1/10W
R312	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R313	1-216-081-00	METAL CHIP	22K	5%	1/10W
R314	1-216-089-00	METAL CHIP	47K	5%	1/10W
R315	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R316	1-216-117-00	METAL CHIP	680K	5%	1/10W
R317	1-216-117-00	METAL CHIP	680K	5%	1/10W
R320	1-216-049-00	METAL CHIP	1K	5%	1/10W
R400	1-216-037-00	METAL CHIP	330	5%	1/10W
R401	1-216-037-00	METAL CHIP	330	5%	1/10W
R402	1-216-037-00	METAL CHIP	330	5%	1/10W
R403	1-216-037-00	METAL CHIP	330	5%	1/10W
R404	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R405	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R406	1-216-113-00	METAL CHIP	470K	5%	1/10W
R407	1-216-113-00	METAL CHIP	470K	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-073-00	METAL CHIP	10K	5%	1/10W
R410	1-216-045-00	METAL CHIP	680	5%	1/10W
R411	1-216-037-00	METAL CHIP	330	5%	1/10W
R412	1-216-073-00	METAL CHIP	10K	5%	1/10W
R413	1-216-045-00	METAL CHIP	680	5%	1/10W
R414	1-216-073-00	METAL CHIP	10K	5%	1/10W
R415	1-216-083-00	METAL CHIP	27K	5%	1/10W
R416	1-216-073-00	METAL CHIP	10K	5%	1/10W
R417	1-216-083-00	METAL CHIP	27K	5%	1/10W
R418	1-216-085-00	METAL CHIP	33K	5%	1/10W
R419	1-216-084-00	METAL CHIP	30K	5%	1/10W
R420	1-216-089-00	METAL CHIP	47K	5%	1/10W
R421	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R422	1-216-090-00	METAL CHIP	51K	5%	1/10W
R423	1-216-080-00	METAL CHIP	20K	5%	1/10W
R424	1-216-090-00	METAL CHIP	51K	5%	1/10W
R425	1-216-025-00	METAL CHIP	100	5%	1/10W
R426	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R427	1-216-085-00	METAL CHIP	33K	5%	1/10W
R428	1-216-089-00	METAL CHIP	47K	5%	1/10W
R429	1-216-090-00	METAL CHIP	51K	5%	1/10W
R430	1-216-084-00	METAL CHIP	30K	5%	1/10W

TC MAIN | TC SW

Ref. No.	Part No.	Description			Remark
R431	1-216-080-00	METAL CHIP	20K	5%	1/10W
R432	1-216-090-00	METAL CHIP	51K	5%	1/10W
R433	1-216-025-00	METAL CHIP	100	5%	1/10W
R434	1-216-121-00	METAL CHIP	1M	5%	1/10W
R435	1-216-081-00	METAL CHIP	22K	5%	1/10W
R436	1-216-089-00	METAL CHIP	47K	5%	1/10W
R437	1-216-073-00	METAL CHIP	10K	5%	1/10W
R438	1-216-073-00	METAL CHIP	10K	5%	1/10W
R440	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R441	1-216-081-00	METAL CHIP	22K	5%	1/10W
R444	1-216-073-00	METAL CHIP	10K	5%	1/10W
R445	1-216-073-00	METAL CHIP	10K	5%	1/10W
R446	1-216-097-00	METAL CHIP	100K	5%	1/10W
R447	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R448	1-216-089-00	METAL CHIP	47K	5%	1/10W
R449	1-216-113-00	METAL CHIP	470K	5%	1/10W
R450	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R451	1-216-097-00	METAL CHIP	100K	5%	1/10W
R452	1-216-097-00	METAL CHIP	100K	5%	1/10W
R453	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R454	1-216-097-00	METAL CHIP	100K	5%	1/10W
R455	1-216-089-00	METAL CHIP	47K	5%	1/10W
R456	1-216-089-00	METAL CHIP	47K	5%	1/10W
R460	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R461	1-216-081-00	METAL CHIP	22K	5%	1/10W
R462	1-216-082-00	METAL GLAZE	24K	5%	1/10W
R463	1-216-073-00	METAL CHIP	10K	5%	1/10W
R464	1-216-073-00	METAL CHIP	10K	5%	1/10W
R466	1-216-025-00	METAL CHIP	100	5%	1/10W
R467	1-216-025-00	METAL CHIP	100	5%	1/10W
R470	1-216-073-00	METAL CHIP	10K	5%	1/10W
R471	1-216-073-00	METAL CHIP	10K	5%	1/10W
R472	1-216-073-00	METAL CHIP	10K	5%	1/10W
R473	1-216-073-00	METAL CHIP	10K	5%	1/10W
R474	1-216-073-00	METAL CHIP	10K	5%	1/10W
R475	1-216-081-00	METAL CHIP	22K	5%	1/10W
R480	1-216-073-00	METAL CHIP	10K	5%	1/10W
R481	1-216-043-00	METAL CHIP	560	5%	1/10W
R482	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R483	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R484	1-216-081-00	METAL CHIP	22K	5%	1/10W
R503	1-216-073-00	METAL CHIP	10K	5%	1/10W
R504	1-216-083-00	METAL CHIP	27K	5%	1/10W
R2001	1-216-073-00	METAL CHIP	10K	5%	1/10W
R4000	1-216-049-00	METAL CHIP	1K	5%	1/10W
R4001	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4002	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4003	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4004	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4005	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4006	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4007	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R4008	1-216-298-00	METAL CHIP	2.2	5%	1/10W
⚠R4010	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R4421	1-216-025-00	METAL CHIP	100	5%	1/10W

< VARIABLE RESISTOR >

RV201	1-241-136-11	RES, ADJ, CARBON 10K
RV301	1-241-136-11	RES, ADJ, CARBON 10K

< TEST PIN >

* TP101	1-564-517-11	PLUG, CONNECTOR 2P
* TP201	1-564-518-11	PLUG, CONNECTOR 3P
* TP401	1-564-518-11	PLUG, CONNECTOR 3P

< VIBRATOR >

X401	1-577-358-21	VIBRATOR, CERAMIC (4MHz)

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*	A-4356-154-A	TC SW BOARD, COMPLETE (IT)
*	A-4356-182-A	TC SW BOARD, COMPLETE (US, Canadian, AEP, UK)

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< CONNECTOR >

* CN351	1-580-476-11	SOCKET, CONNECTOR 15P

< DIODE >

D351	8-719-310-24	DIODE SEL4525C-C (DECK A: ◁)
D352	8-719-310-24	DIODE SEL4525C-C (DECK A: ▷)
D353	8-719-312-37	DIODE SEL4225C-C (HIGH SPEED)
D354	8-719-312-37	DIODE SEL4225C-C (NORMAL SPEED)
D355	8-719-312-37	DIODE SEL4225C-C (CD SYNCHRO)
D356	8-719-304-51	DIODE SEL4825A (DECK B: PHASE ❚❚)
D357	8-719-310-24	DIODE SEL4525C-C (DECK B: ◁)
D358	8-719-310-24	DIODE SEL4525C-C (DECK B: ▷)
D359	8-719-312-37	DIODE SEL4225C-C (DECK B: REC ●)

< RESISTOR >

R351	1-216-029-00	METAL CHIP	150	5%	1/10W
R352	1-216-033-00	METAL CHIP	220	5%	1/10W
R353	1-216-037-00	METAL CHIP	330	5%	1/10W
R354	1-216-041-00	METAL CHIP	470	5%	1/10W
R355	1-216-045-00	METAL CHIP	680	5%	1/10W
R356	1-216-049-00	METAL CHIP	1K	5%	1/10W
R357	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R358	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R359	1-216-029-00	METAL CHIP	150	5%	1/10W

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TC SW | TRANSFORMER

Ref. No.	Part No.	Description			Remark
R360	1-216-033-00	METAL CHIP	220	5%	1/10W
R361	1-216-037-00	METAL CHIP	330	5%	1/10W
R362	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R364	1-216-049-00	METAL CHIP	1K	5%	1/10W
R365	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R366	1-216-075-00	METAL CHIP	12K	5%	1/10W
R369	1-216-295-00	METAL CHIP	0	5%	1/10W
R370	1-216-295-00	METAL CHIP	0	5%	1/10W
R381	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R382	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
		< SWITCH >			
S351	1-554-303-21	SWITCH, TACTILE (DECK A: □)			
S352	1-554-303-21	SWITCH, TACTILE (DECK A: ▷)			
S353	1-554-303-21	SWITCH, TACTILE (DECK A: ◁)			
S354	1-554-303-21	SWITCH, TACTILE (DECK B: ◀◀)			
S355	1-554-303-21	SWITCH, TACTILE (DECK B: ▶▶)			
S356	1-554-303-21	SWITCH, TACTILE (DECK B: REC ●)			
S357	1-554-303-21	SWITCH, TACTILE (HIGH SPEED)			
S358	1-554-303-21	SWITCH, TACTILE (NORMAL SPEED)			
S359	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)			
S360	1-554-303-21	SWITCH, TACTILE (DECK B: □)			
S361	1-554-303-21	SWITCH, TACTILE (DECK B: PHASE ▮▮)			
S362	1-554-303-21	SWITCH, TACTILE (DECK B: ▷)			
S363	1-554-303-21	SWITCH, TACTILE (DECK B: ◁)			
S364	1-554-303-21	SWITCH, TACTILE (DECK A: ◀◀)			
S365	1-554-303-21	SWITCH, TACTILE (DECK A: ▶▶)			
S371	1-570-850-21	SWITCH, SLIDE (DIRECTION)			
S372	1-570-850-21	SWITCH, SLIDE (DULBY NR)			
**********					
*	1-645-188-11	TRANSFORMER BOARD			
		**********			
		< CAPACITOR >			
C957	1-136-165-00	FILM	0.1uF	5%	50V
C958	1-136-165-00	FILM	0.1uF	5%	50V
		< CONNECTOR >			
* CN961	1-564-321-00	PIN, CONNECTOR 2P			
		< FUSE >			
⚠F953	1-532-783-21	FUSE, MICRO (SECONDARY) (5A, 125V) (US, Canadian)			
⚠F953	1-532-846-11	LI NK, IC (5A) (AEP, UK, IT)			
⚠F954	1-532-783-21	FUSE, MICRO (SECONDARY) (5A, 125V) (US, Canadian)			
⚠F954	1-532-846-11	LI NK, IC (5A) (AEP, UK, IT)			
**********					

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
16	1-575-903-11	WIRE, FLAT TYPE (15 CORE)	
18	1-696-727-11	WIRE (FLAT TYPE) (15 CORE)	
19	1-575-731-11	WIRE, FLAT TYPE (7 CORE)	
56	1-541-860-41	MOTOR, DC FAN	
118	1-696-731-11	WIRE (FLAT TYPE) (15 CORE)	
119	1-696-725-11	WIRE (FLAT TYPE) (9 CORE)	
120	1-696-726-11	WIRE (FLAT TYPE) (13 CORE)	
167	1-638-983-11	PC BOARD, MOTOR FLEXIBLE	
⚠F901	1-532-285-00	FUSE T1A (AEP, UK, IT)	
⚠F901	1-532-745-11	FUSE 3.15A 125V (US, Canadian)	
HP101	A-2003-868-F	BASE ASSY, HEAD (DECK A)	
HRPE101A	-2003-838-F	BASE ASSY, HEAD (DECK B)	
M101A	X-3363-501-1	MOTOR ASSY, REEL (DECK A)	
M101B	X-3363-501-1	MOTORASSY, REEL (DECK B)	
M102A	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK A)	
M102B	X-3359-417-1	MOTOR ASSY, CAPSTAN (DECK B)	
⚠T901	1-697-006-11	TRANSFORMER, POWER (US, Canadian)	
⚠T901	1-697-007-11	TRANSFORMER, POWER (AEP, IT)	
⚠T901	1-697-008-11	TRANSFORMER, POWER (UK)	

****

****
HARDWARE LIST
****

#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#2	7-682-547-04	SCREW +BVTT 3X6 (S)
#3	7-682-548-04	SCREW +BVTT 3X8 (S)
#4	7-621-770-67	SCREW +PTT 2.6X6 (S)
#5	7-685-645-79	SCREW +BTP 3X6 TYPE2 N-S
#6	7-621-255-15	SCREW +PTT 2X3 (S)
#7	7-627-556-08	SCREW +P 2.6X2.8
#8	7-621-775-00	SCREW +B 2.6X3
#9	7-685-649-79	SCREW +BVTP 3X14

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9-957-397-11

Sony Corporation
Audio Group

English
92I0493-1
Printed in Japan
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Published by Customer Relations and Service Group

CDP-H3750

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Tourist Model

This set is the CD player section in FH-E705C, MHC-2750/3750.

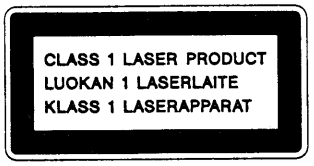
Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM23-5BD3
Optical Pick-Up Block Type	BU-5BD3

SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser (λ = 780 nm) Emission duration: continuous
Laser output	Max. 44.6 μW* * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Signal to noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB
Output level	1.6 V (at 50 kilohms)
Load impedance	More than 10 kilohms

Design and specifications subject to change without notice.

For the United Kingdom and European countries.



This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

COMPACT DISC PLAYER

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

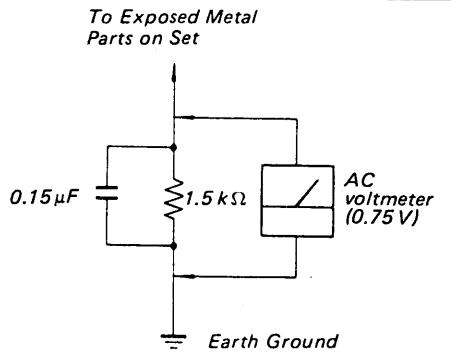


Fig. A. Using an AC voltmeter to check AC leakage.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

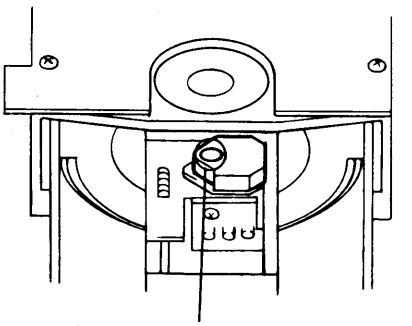
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential diference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

LASER DIODE AND FOCUS SERCH OPERATION CHECK

1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



- Confirm that laser beam is spread.
- Up and down motion of the objective lens. (3 times)

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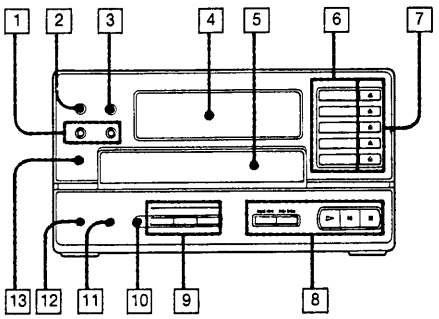
SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. PARTS IDENTIFICATION

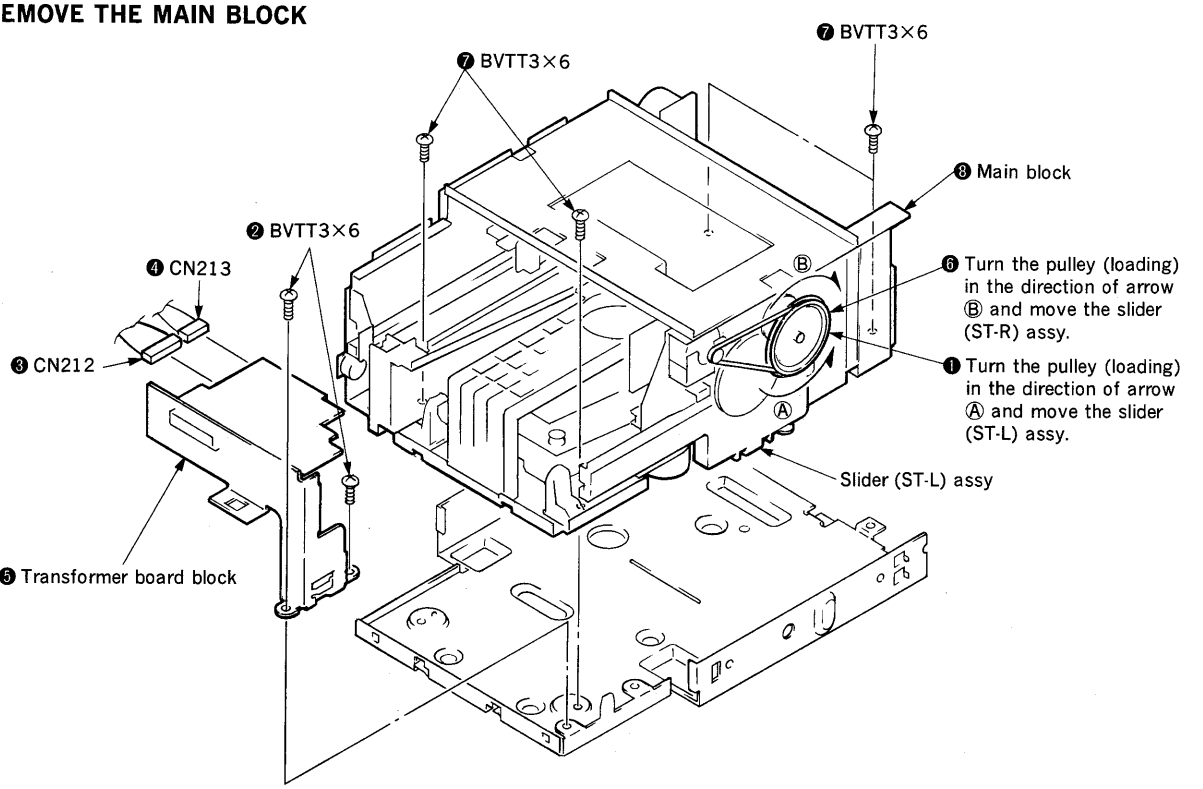


1 CHARACTER ◁/▷ buttons ⑭
2 MEMO INPUT button ⑭
3 CURSOR button ⑭
4 Display window
5 Disc tray door
6 DISC 1 — 5 selectors and disc tray indicators ㉘ ㉞
7 OPEN/CLOSE ⏏ buttons ㉘
8 CD operation buttons
■: Stop button
❚❚: Pause button
▷: Play button
⏮◀◀ ▶▶⏭: Manual search (when kept depressed)/AMS* (when pressed) buttons
9 PLAY MODE buttons
PROGRAM button ㊹
SHUFFLE button ㊵
CONTINUE button ㉚
10 REPEAT button ㊷
11 TIME/MEMO button ㉜ ㊱
12 SOUND FIELD FILE button ㊽
13 ERASE button ㊱ ㊽

SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

2-1. REMOVE THE MAIN BLOCK


❼ BVTT3×6
❼ BVTT3×6
❽ Main block
❷ BVTT3×6
❹ CN213
❸ CN212
❻ Turn the pulley (loading) in the direction of arrow Ⓑ and move the slider (ST-R) assy.
❶ Turn the pulley (loading) in the direction of arrow Ⓐ and move the slider (ST-L) assy.
Slider (ST-L) assy
❺ Transformer board block

2-2. EXCHANGE OF STOCKER ASSY

How to Attachment
❶ Turn the pulley (loading) set the chassis hole position to slider (ST-L) assy. (See Fig. A)
❷ Turn the pulley (loading) ⓐ set the position of illustration for slider (TB).
❸ Attach the stocker assy.

Note) Sure attach to ditch of chassis side for shaft or claw of stocker assy.

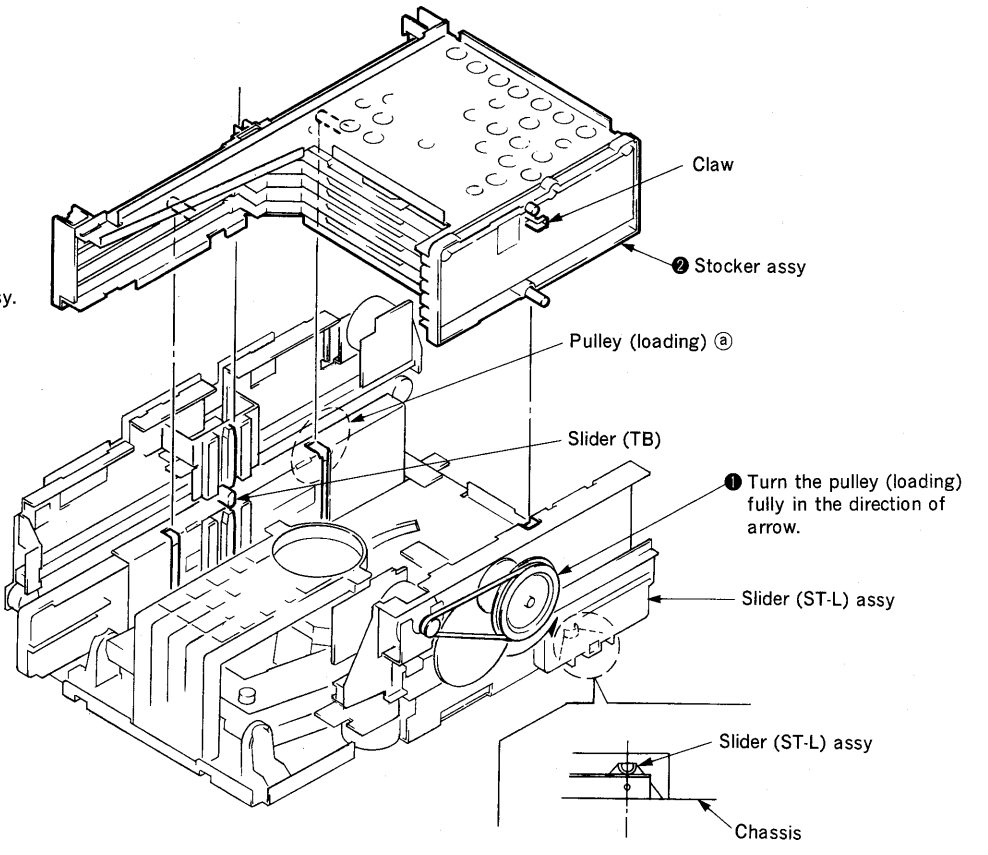
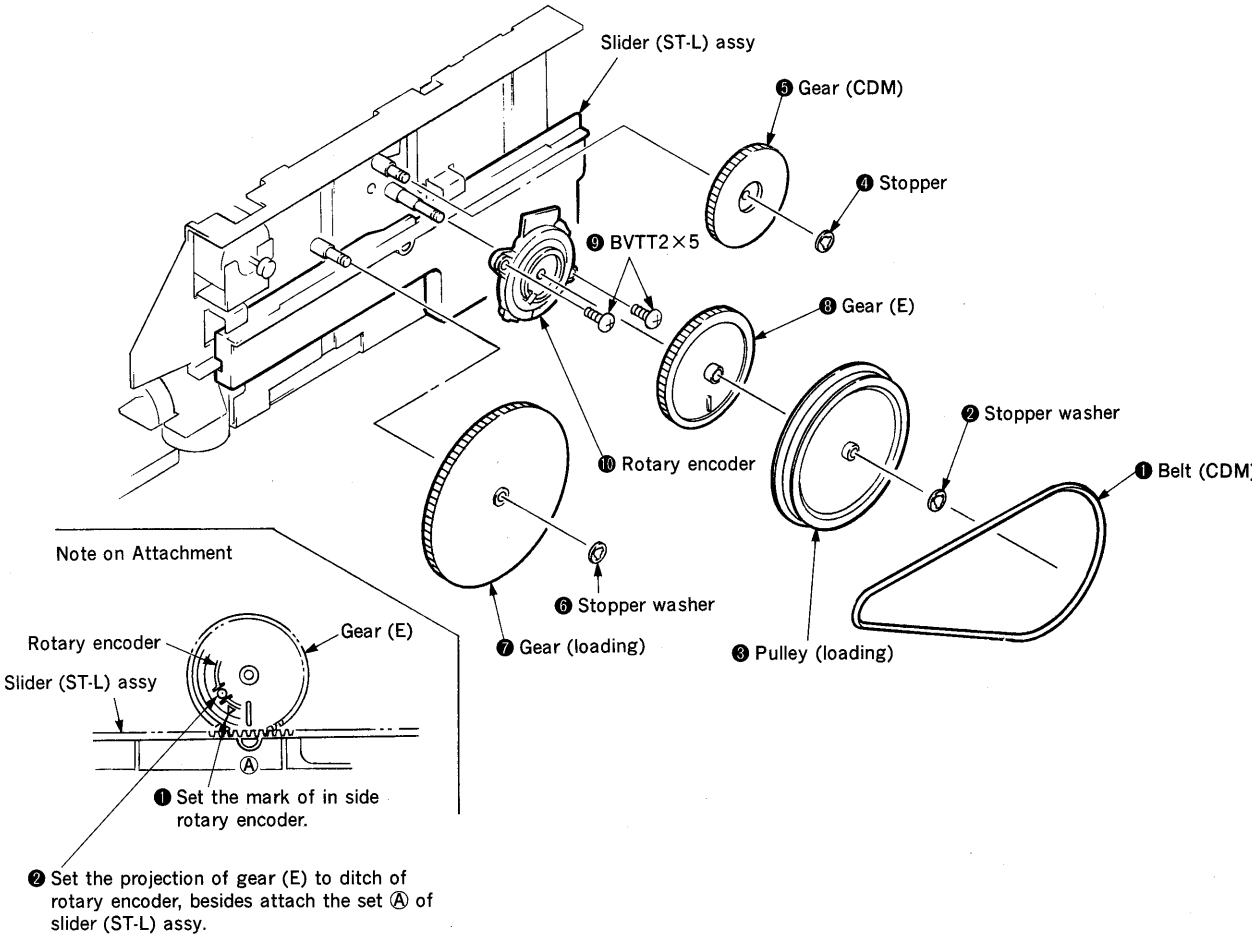


Fig. A

2-3. EXCHANGE OF ROTARY ENCODER

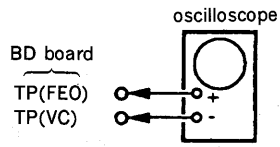

Slider (ST-L) assy
❺ Gear (CDM)
❹ Stopper
❾ BVTT2×5
❽ Gear (E)
❷ Stopper washer
❿ Rotary encoder
❶ Belt (CDM)
❻ Stopper washer
❼ Gear (loading)
❸ Pulley (loading)
Note on Attachment
Rotary encoder
Gear (E)
Slider (ST-L) assy
Ⓐ
❶ Set the mark of in side rotary encoder.
❷ Set the projection of gear (E) to ditch of rotary encoder, besides attach the set Ⓐ of slider (ST-L) assy.

SECTION 3
ELECTRICAL BLOCK CHECKING

Note :

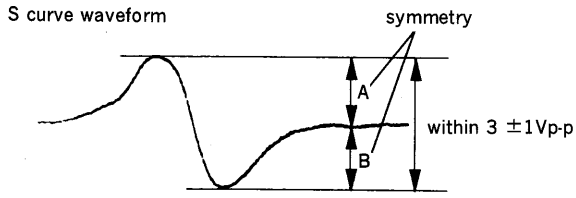
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

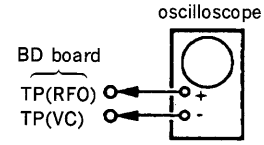


5. After check, remove the lead wire connected in step 2.

Note : • Try to mesure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

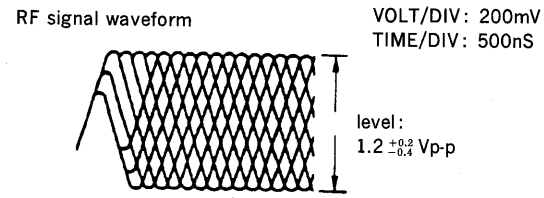


Procedure :

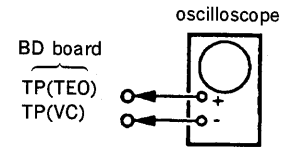
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

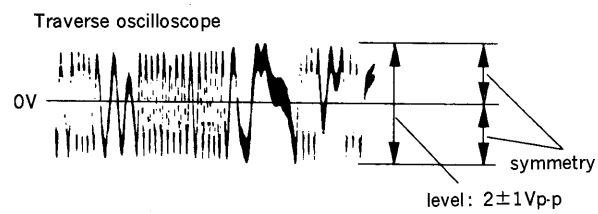


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the osilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

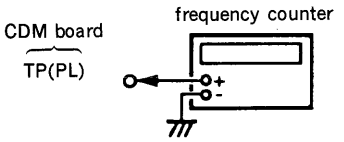


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PL) with lead wire.



2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

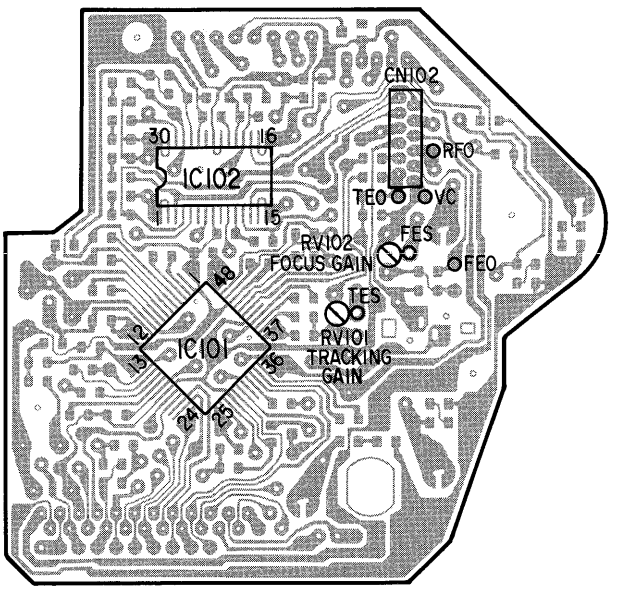
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

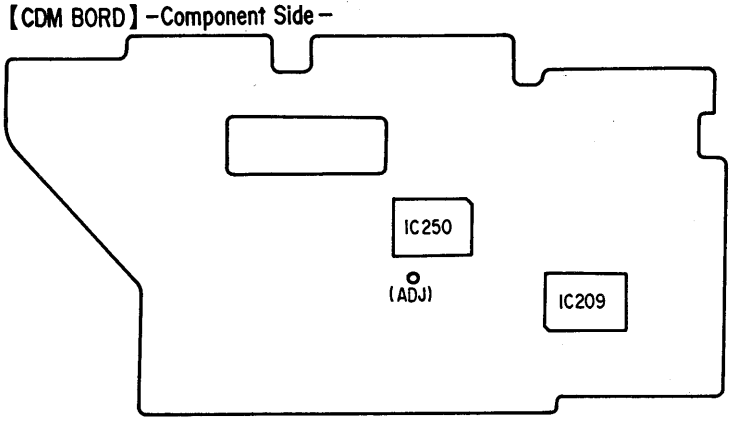
Checking Location :

【BD Board】

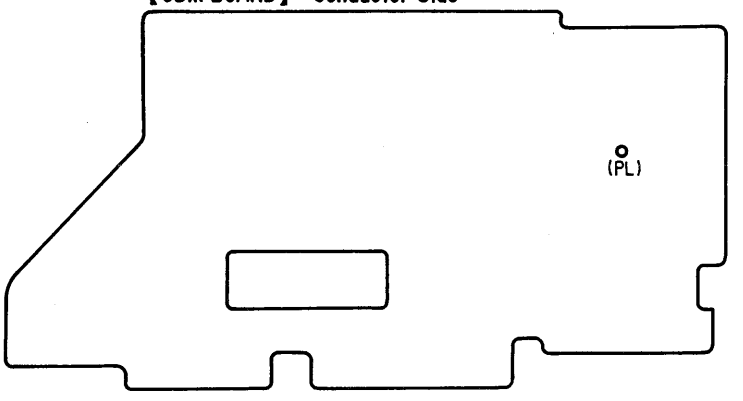
—Conductor Side—



【CDM BORD】-Component Side-



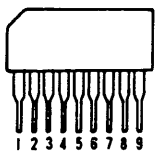
【CDM BOARD】-Conductor Side-



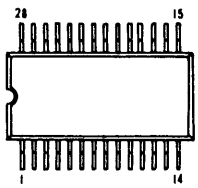
SECTION 4
DIAGRAMS

4-1. SEMICONDUCTOR LEAD LAYOUTS

BA6418N

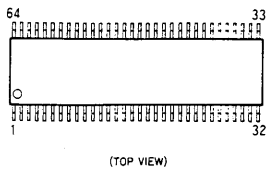


LH5160N-10L



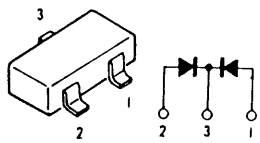
(TOP VIEW)

M66004M4FP

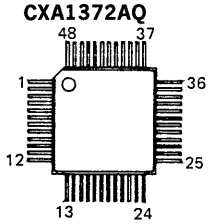


(TOP VIEW)

DCB010

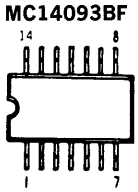


CXA1372AQ



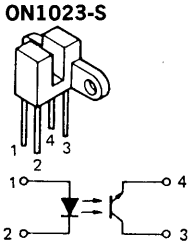
(TOP VIEW)

MC14011BF
MC14093BF

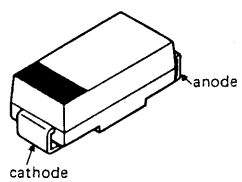


(TOP VIEW)

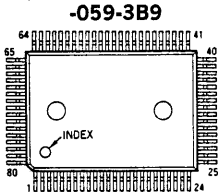
ON1023-S



EC10DS2

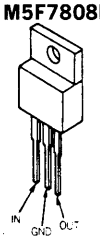


CXD2500AQ
μPD75516GF
-399-3B9
μPD75518GF
-059-3B9

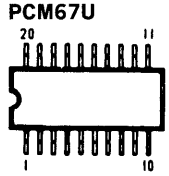


(TOP VIEW)

M5F7807L
M5F7808L

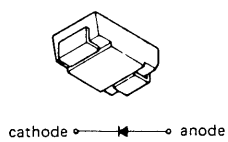


PCM67U

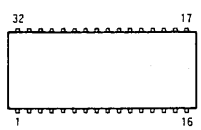


(TOP VIEW)

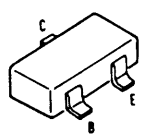
LN1361C
LN1461C



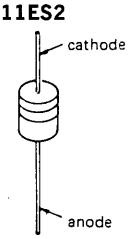
M5218AFP



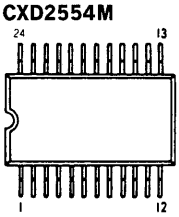
DTC144EK
2SA1602
2SC4154-F



UZP-6.8BB
11EQS04
11ES2

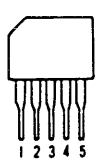


CXD2554M

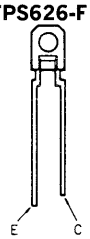


(TOP VIEW)

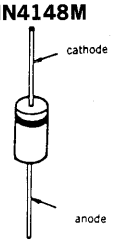
M5293L



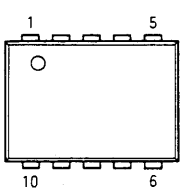
TPS626-F



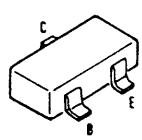
IN4148M



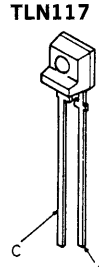
LA5601



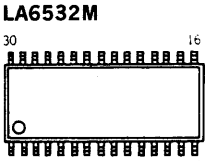
2SB1122-S



TLN117

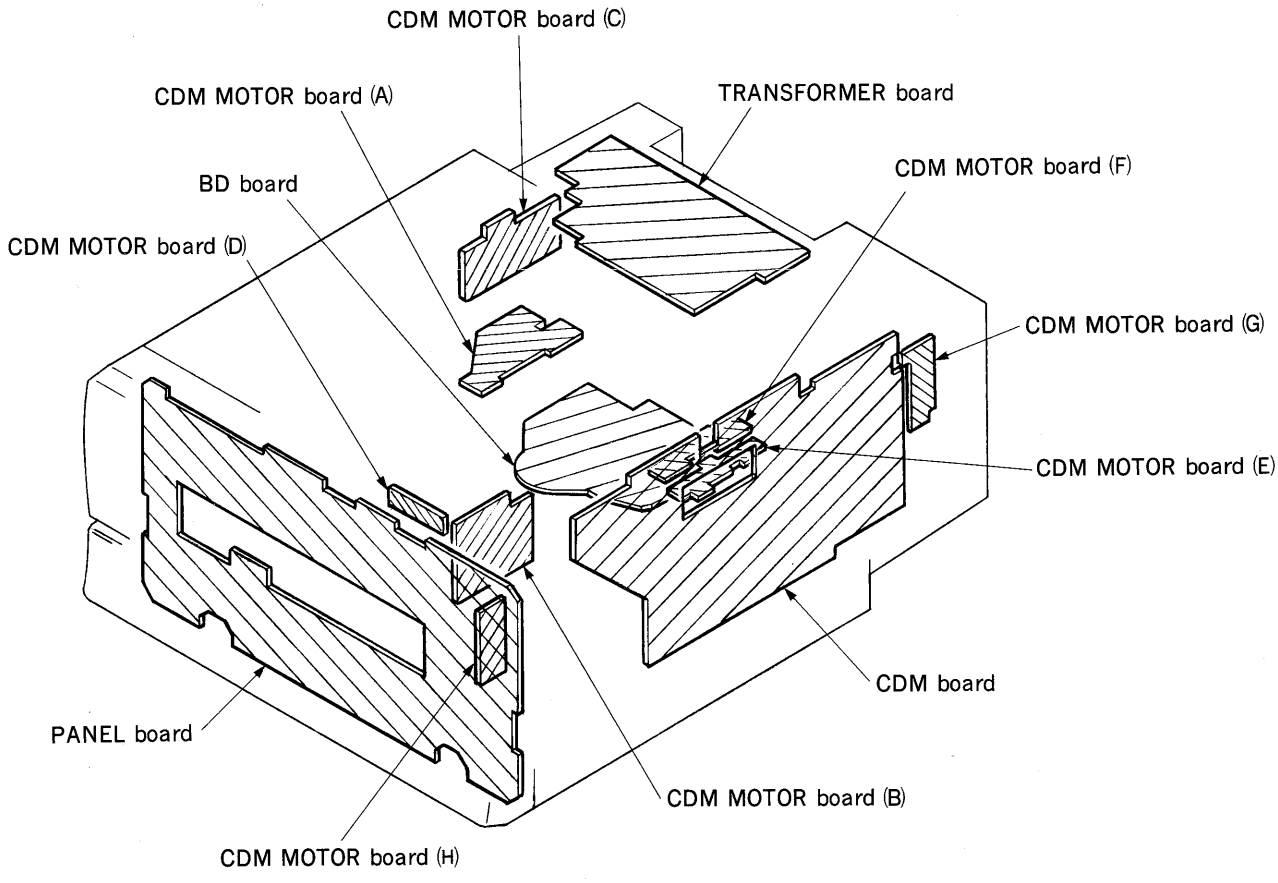


LA6532M



TOP VIEW

4-2. CIRCUIT BOARDS LOCATION



● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	A-9	IC101	B-16
D202	B-9	IC102	B-17
D203	B-6	IC201	C-7
D204	C-9	IC202	B-5
D205	E-13	IC203	B-7
D206	F-14	IC204	B-8
(D206)	A-7	IC206	E-12
D207	F-14	IC207	F-12
D208	F-14	IC208	G-12
D301	G-4	IC209	B-13
D302	F-8	IC210	B-12
D303	F-8	IC211	C-11
D304	F-8	IC212	D-10
D305	G-8	IC213	C-7
D306	G-8	IC214	D-13
D307	G-8	IC215	E-13
D308	G-8	IC216	F-13
D309	G-8	IC250	D-12
D310	G-8	IC301	G-4
D311	G-8	IC302	G-6
D312	G-8	IC401	G-17
D313	G-8	IC601	F-15
D314	H-8		
D315	H-8	Q101	C-16
D316	H-8	Q201	D-14
D317	F-8	Q202	D-14
D318	F-8	Q301	G-4
D319	G-8	Q302	F-8
D320	G-8	Q303	F-9
D321	G-8	Q304	H-3
D322	G-8	Q306	F-7
D323	G-8	Q307	G-7
D324	G-8	Q308	G-7
D325	H-8	Q309	G-7
D326	H-8	Q311	G-7
D327	H-3	Q312	G-5
		Q313	G-5

( ): TRANSFORMER BOARD

Note:
- ○——: parts extracted from the component side.
- ●: Through hole.
- ▒▒: Pattern on the side which is seen.
- ▒▒: Pattern of the rear side.
- ●G: Germany model
- ●IT: Italian model

4-3. PRINTED WIRING BOARDS ● Refer to page 9 for Semiconductor Lead Layouts.

【TRANSFORMER BOARD】

【CDM BOARD】

【BD BOARD】

OPTICAL PICK-UP BLOCK (KSS-240A)

【PANEL BOARD】

FL301 FLUORESCENT INDICATOR TUBE

【CDM MOTOR BOARD(A)】

【CDM MOTOR BOARD(B)】

【CDM MOTOR BOARD(C)】

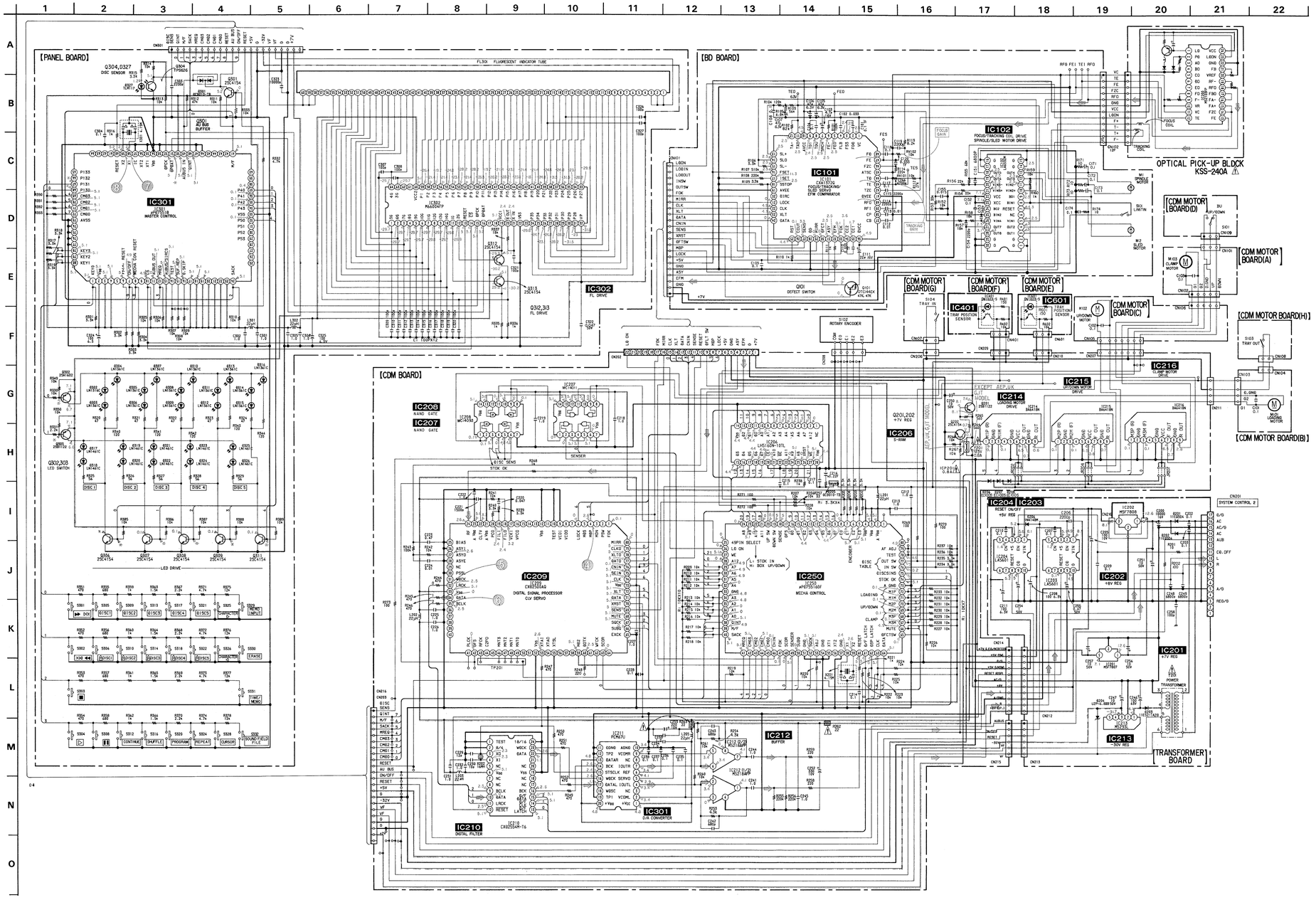
【CDM MOTOR BOARD(D)】

【CDM MOTOR BOARD(E)】

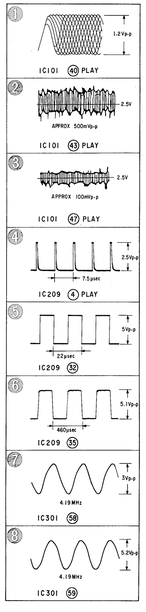
【CDM MOTOR BOARD(F)】

【CDM MOTOR BOARD(G)】

【CDM MOTOR BOARD(H)】



• Waveforms



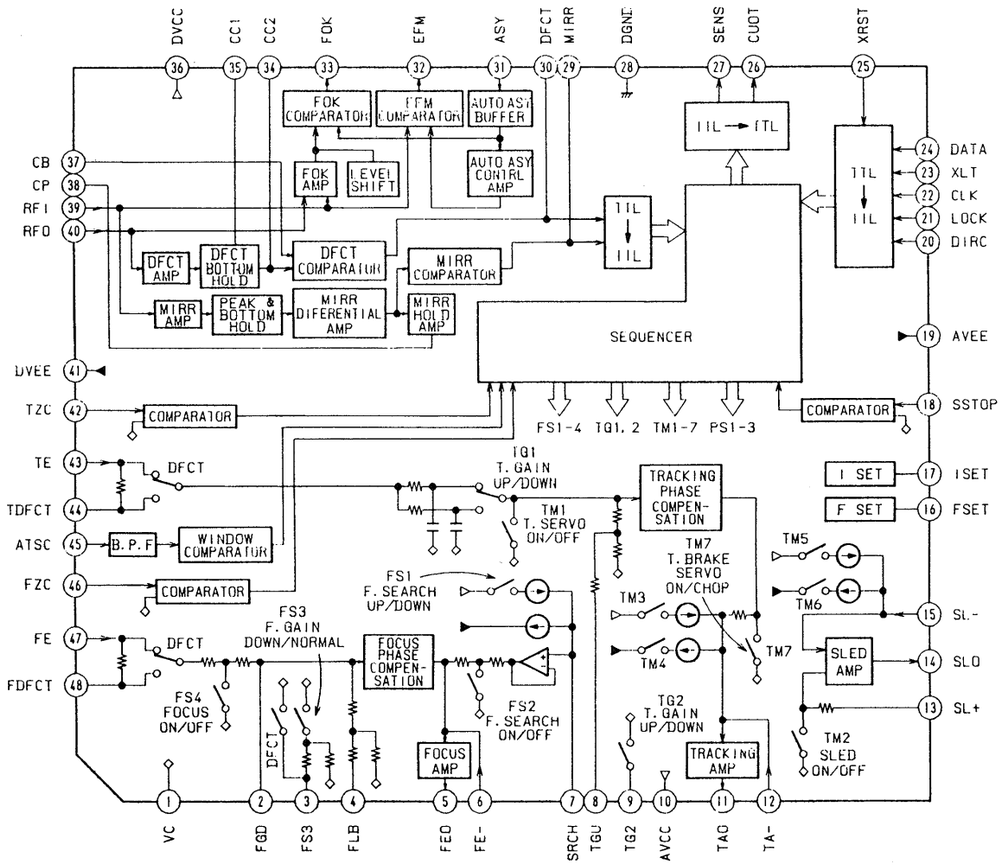
Note:
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : nonflammable resistor.

Note:	Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

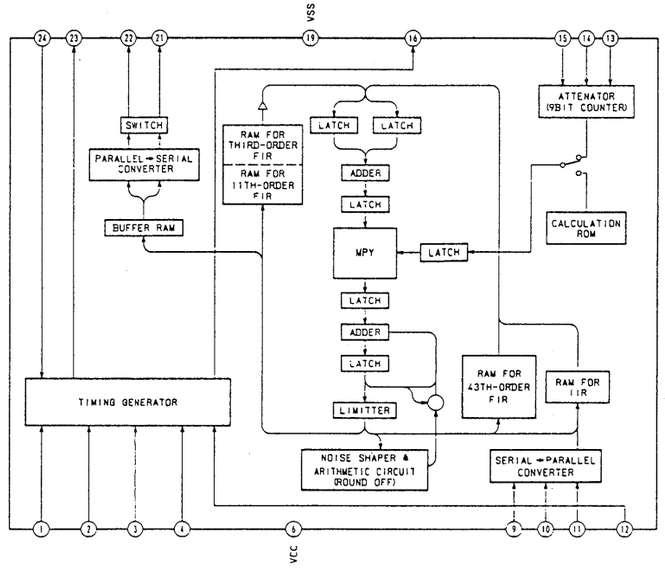
- : B+ Line
- : B− Line
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark : STOP
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- **Signal path.**
  : CD
- G: Germany model
- IT: Italian model

• IC Block Diagrams

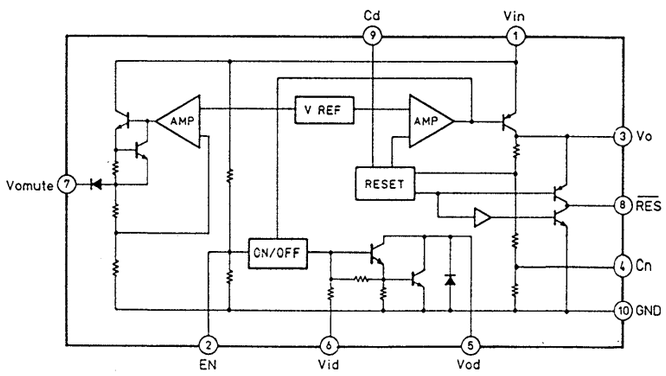
IC101 CXA1372Q



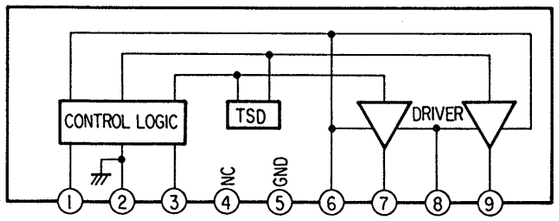
IC210 CXD2554M



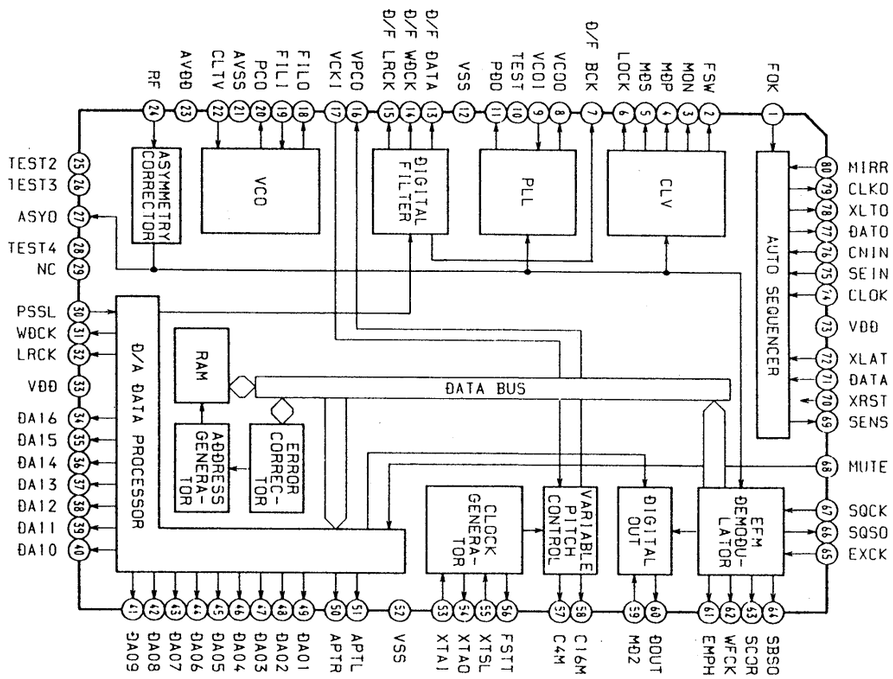
IC203, 204 LA5601



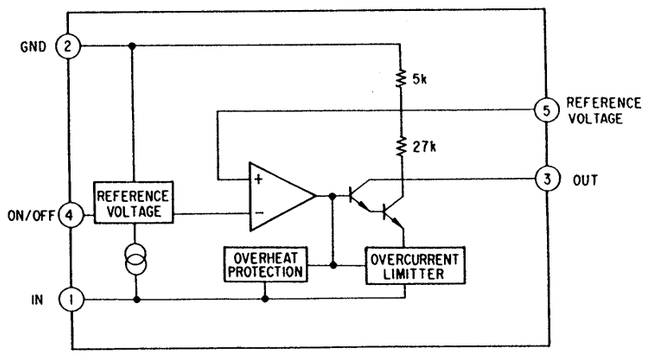
IC214-216 BA6418N



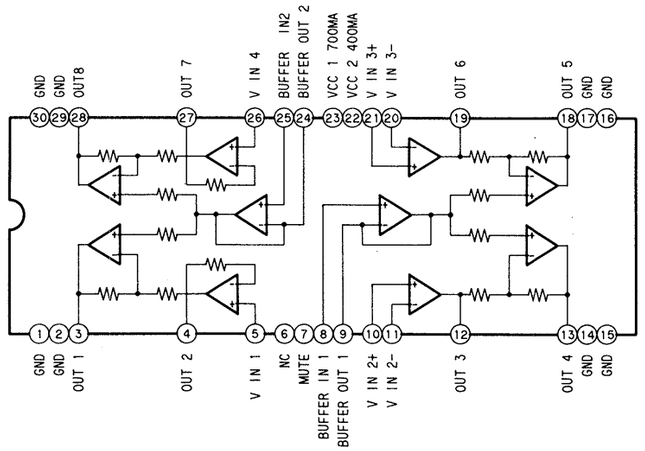
IC209 CXD2500AQ



IC213 M5293L



IC102 LA6532M



SECTION 5
EXPLODED VIEWS

NOTE:

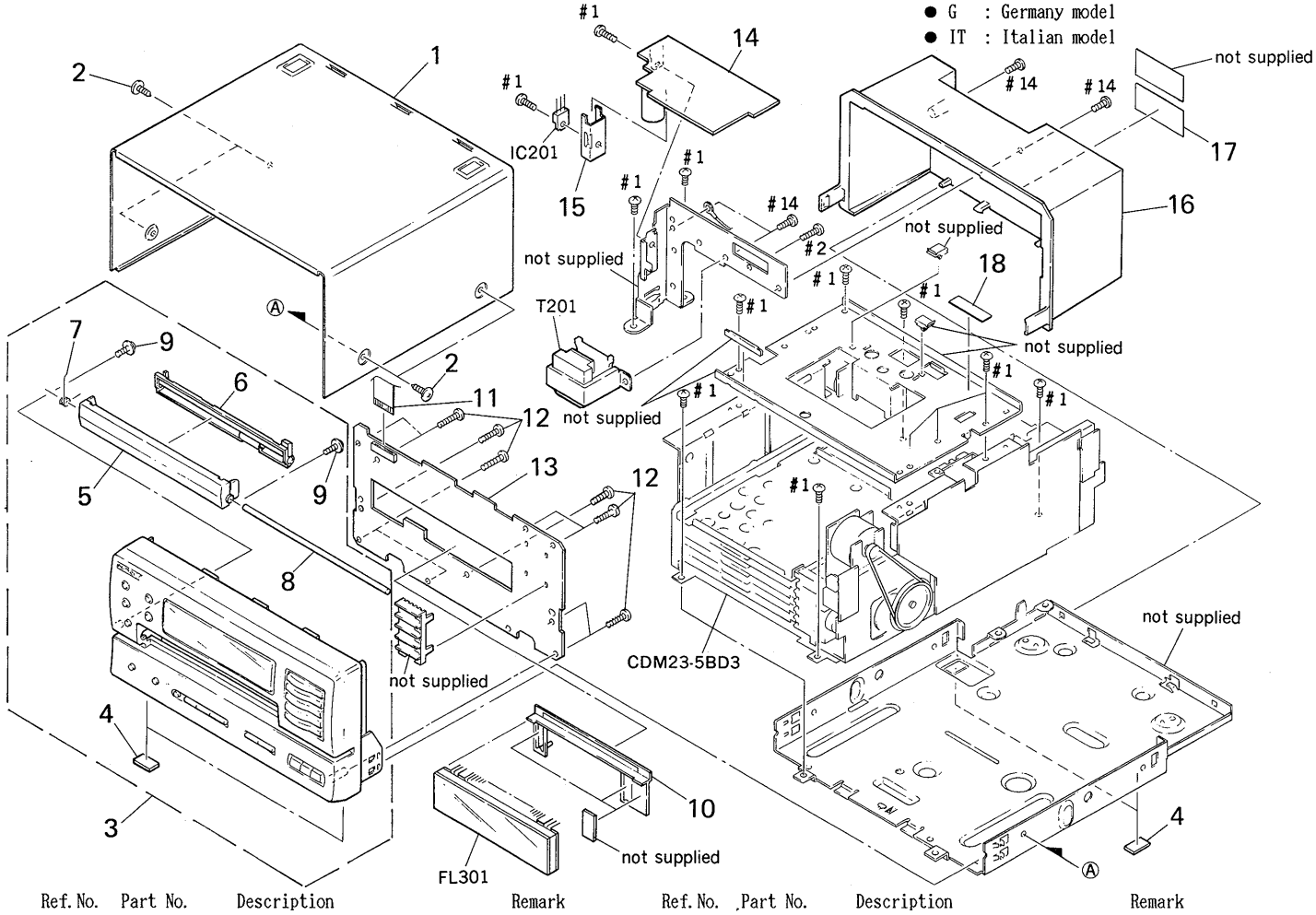
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

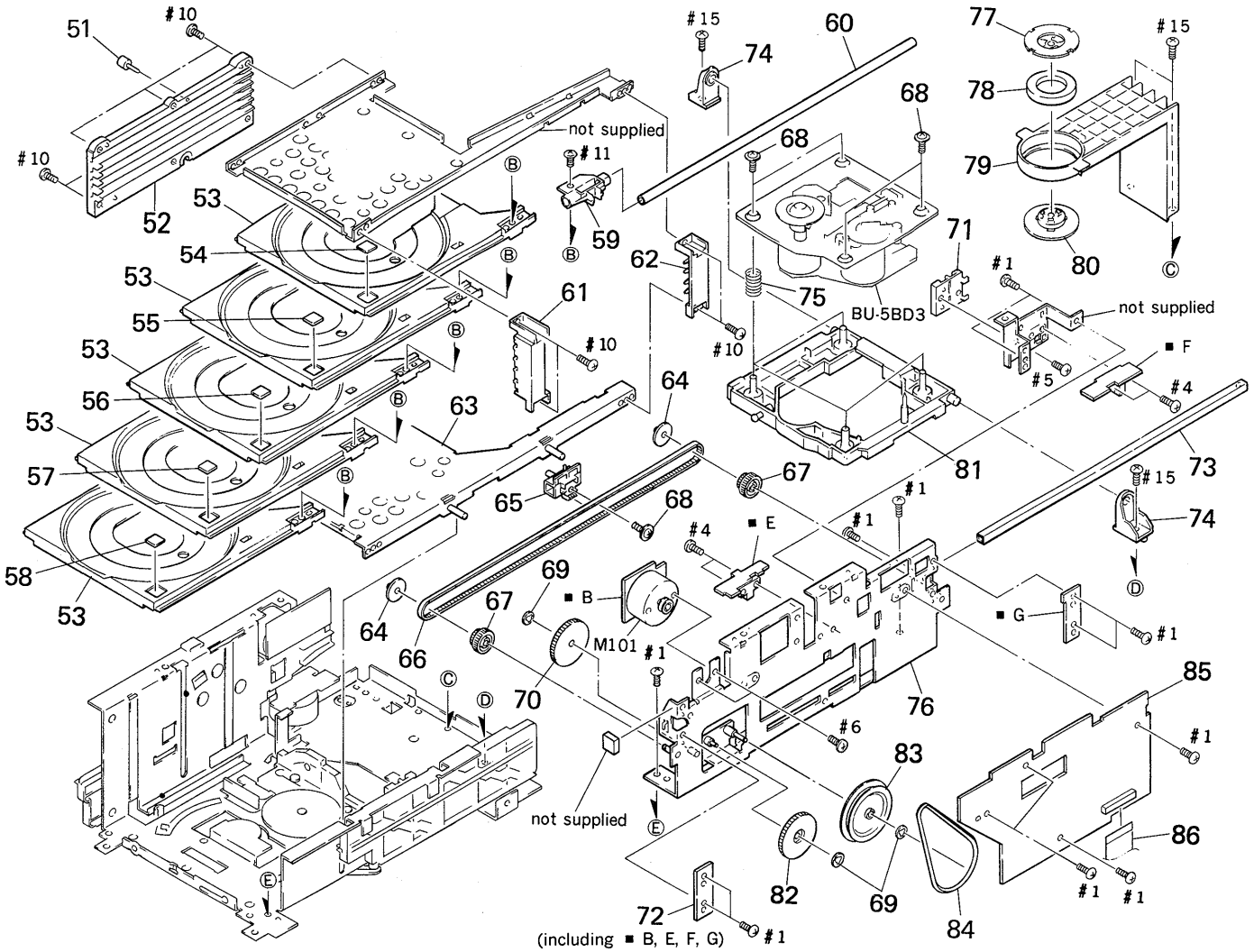
- CND : Canadian model
- G : Germany model
- IT : Italian model

5-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark
* 1	4-944-522-42	CASE (K211522)	
2	3-363-099-01	SCREW (CASE 3 TP2)	
3	X-4942-946-1	PANEL ASSY, FRONT	
4	4-930-336-21	FOOT (FELT)	
5	4-954-694-01	DOOR (A)	
6	4-954-698-01	DOOR (B)	
7	4-954-693-01	SPRING (DOOR)	
8	4-954-695-01	SHAFT (DOOR)	
9	4-933-134-01	SCREW (+PTPWH M2.6X6)	
* 10	4-954-701-01	HOLDER (FL TUBE)	
11	1-696-633-11	WIRE (FLAT TYPE)	
12	4-951-620-01	SCREW (2.6X8), +BVTP	
* 13	A-4649-455-A	PANEL BOARD, COMPLETE (EXCEPT AEP, UK, G, IT)	
* 13	A-4649-462-A	PANEL BOARD, COMPLETE (G)	
* 13	A-4649-465-A	PANEL BOARD, COMPLETE (AEP, UK, IT)	
* 14	A-4649-456-A	TRANSFORMER BOARD, COMPLETE (EXCEPT AEP, UK, G, IT)	
* 14	A-4649-461-A	TRANSFORMER BOARD, COMPLETE (G)	
* 14	A-4649-464-A	TRANSFORMER BOARD, COMPLETE (AEP, UK, IT)	
* 15	3-309-144-21	HEAT SINK	
* 16	4-954-699-01	PANEL, BACK	
* 17	4-941-548-01	LABEL, CLASS 1 (EXCEPT US, CND)	
* 18	3-703-044-26	LABEL, CAUTION (CND)	
FL301	1-519-738-11	INDICATOR TUBE, FLUORESCENT	
IC201	8-759-071-48	IC M5F7807L	
⚠T201	1-450-984-11	TRANSFORMER, POWER	

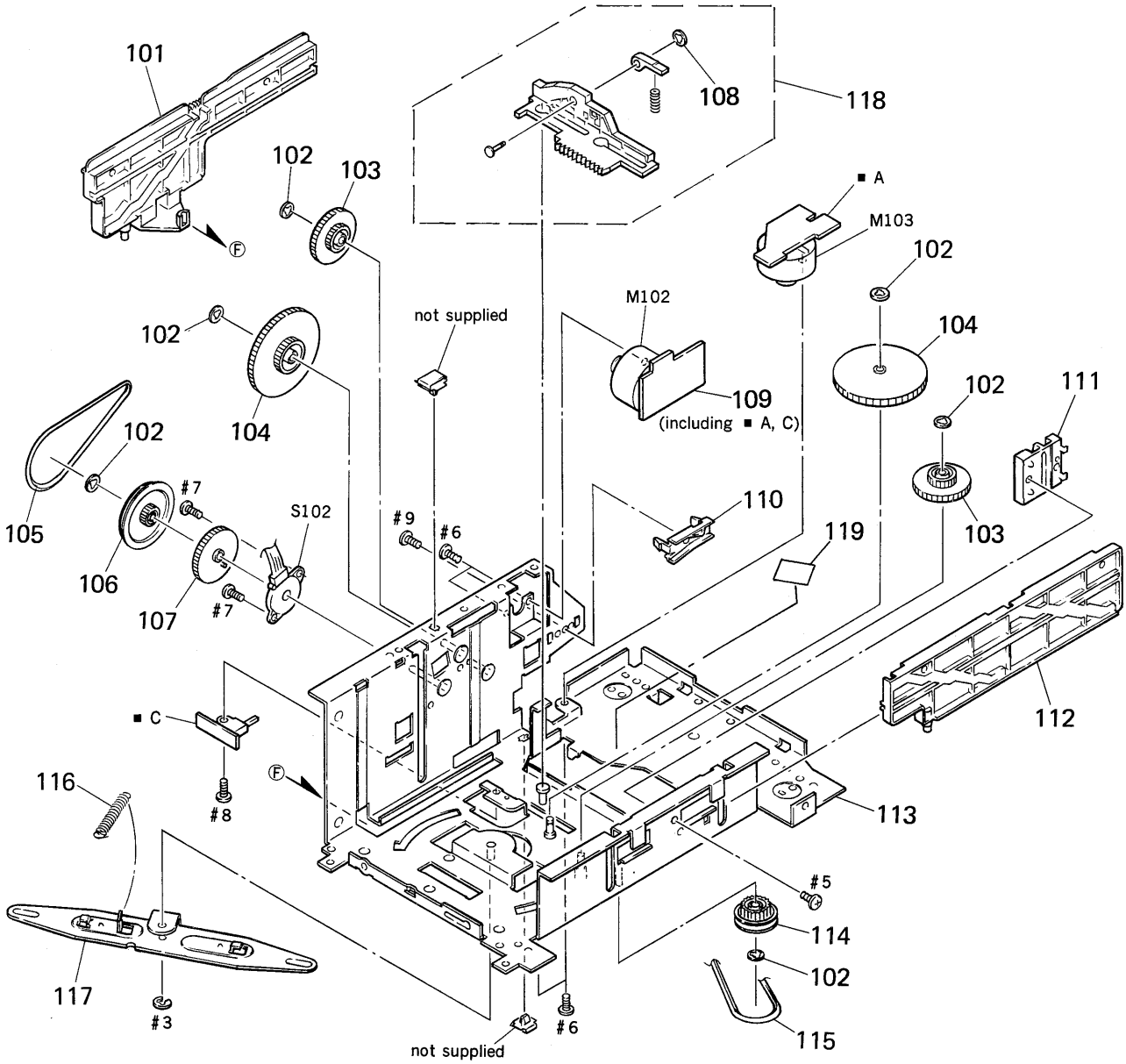
5-2. CD MECHANISM NECTION (1) (CDM23-5BD3)



Ref. No.	Part No.	Description	Remark
51	4-954-649-01	SHAFT (ST-L)	
52	4-954-644-01	BRACKET (STOCKER L)	
53	4-954-638-01	TABLE, DISK	
54	4-954-651-01	EMBLEM (TABLE)	
55	4-954-651-11	EMBLEM (TABLE)	
56	4-954-651-21	EMBLEM (TABLE)	
57	4-954-651-31	EMBLEM (TABLE)	
58	4-954-651-41	EMBLEM (TABLE)	
59	4-954-639-01	GUIDE (TB)	
60	4-954-648-01	SHAFT (TABLE GUIDE)	
61	4-954-645-01	GUIDE (ST-RF)	
62	4-954-646-01	GUIDE (ST-RR)	
* 63	X-4942-943-1	BRACKET (ST-B) ASSY	
64	4-954-628-01	FLANGE (PULLEY)	
65	4-954-630-01	SLIDER (TB)	
66	4-954-634-01	BELT (SL)	
67	4-954-629-01	PULLEY (SL)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
69	3-669-595-00	WASHER (2), STOPPER	
70	4-954-627-01	GEAR (SL)	

Ref. No.	Part No.	Description	Remark
* 71	4-954-621-01	STOPPER (TB)	
* 72	1-645-607-11	CDM MOTOR BOARD	
* 73	4-954-631-01	SHAFT (SL GUIDE)	
* 74	4-954-623-01	FULCRUM (BU)	
75	4-948-503-01	SPRING (BU), COMPRESSION	
* 76	X-4942-941-1	BRACKET (SL-A) ASSY	
77	4-929-762-01	YOKE, CHUCKING	
78	1-452-676-11	MAGNET	
79	4-954-650-01	HOLDER (MG)	
80	4-955-230-01	PULLEY (CHECKING)	
* 81	X-4942-942-1	HOLDER (BU) ASSY	
82	4-954-625-01	GEAR (CDM)	
83	3-372-516-01	PULLEY (LOADING)	
84	4-954-624-01	BELT (CDM)	
* 85	A-4649-352-A	CDM BOARD, COMPLETE (EXCEPT AEP, UK, G, IT)	
* 85	A-4649-463-A	CDM BOARD, COMPLETE (G)	
* 85	A-4649-466-A	CDM BOARD, COMPLETE (AEP, UK, IT)	
86	1-696-634-11	WIRE (FLAT TYPE)	
M101	A-4660-232-A	MOTOR (CDM) ASSY	

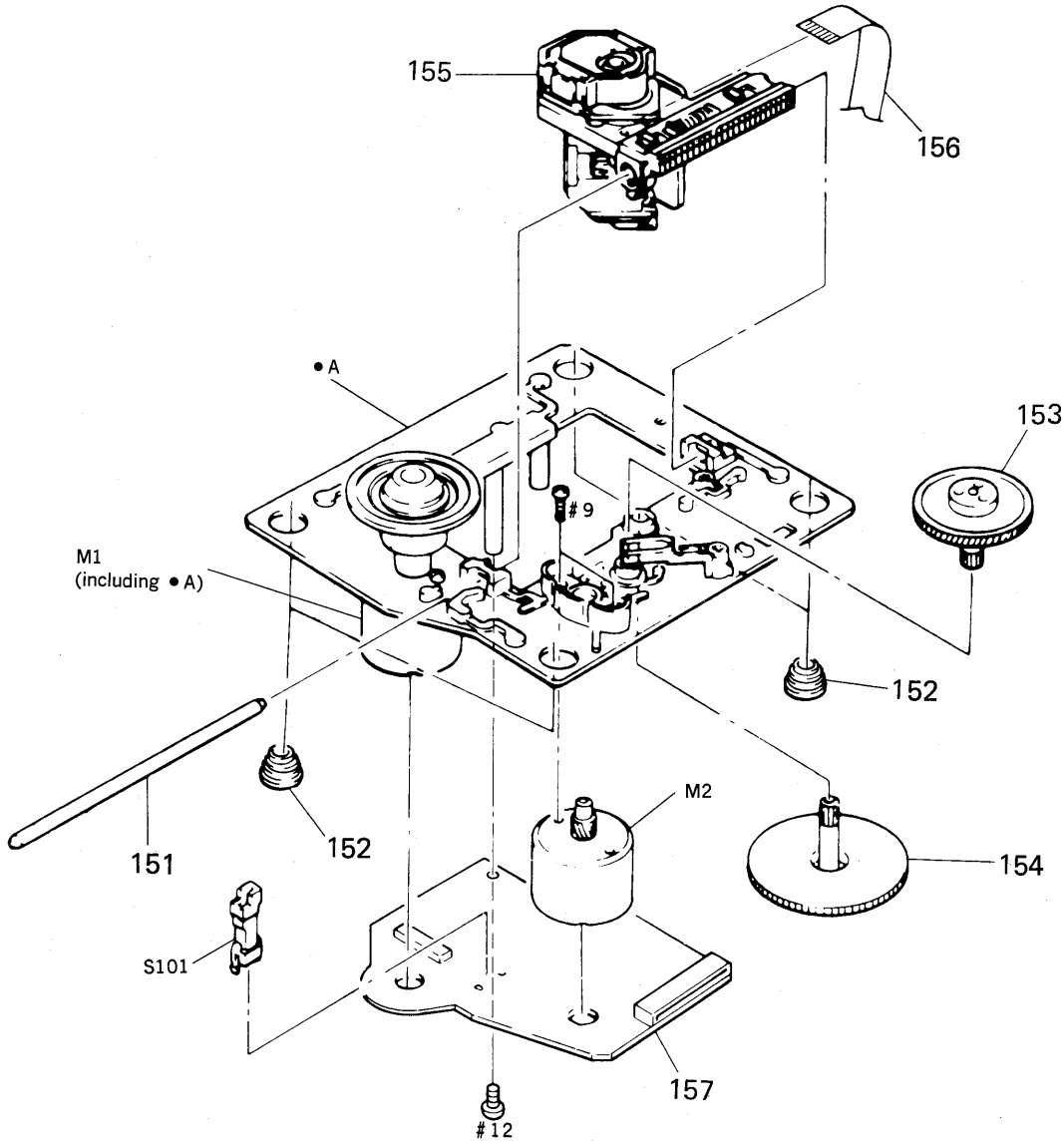
5-3. CD MECHANISM SECTION (2) (CDM23-5BD3)



Ref. No.	Part No.	Description	Remark
101	X-4942-939-1	SLIDER (ST-L) ASSY	
102	3-669-595-00	WASHER (2), STOPPER	
103	4-954-625-01	GEAR (CDM)	
104	3-372-517-01	GEAR (LOADING)	
105	4-954-624-01	BELT (CDM)	
106	3-372-516-01	PULLEY (LOADING)	
107	4-954-636-01	GEAR (E)	
108	3-681-678-00	WASHER, SLIT	
* 109	1-645-607-11	CDM MOTOR BOARD	
* 110	4-954-633-01	GUIDE (TB-LR)	
* 111	4-954-621-01	STOPPER (TB)	

Ref. No.	Part No.	Description	Remark
112	X-4942-940-1	SLIDER (ST-R) ASSY	
* 113	X-4942-937-1	CHASSIS (CDM) ASSY	
114	4-954-637-01	PULLEY (BU)	
115	4-954-635-01	BELT (BU)	
116	4-955-168-01	SPRING, TENSION	
* 117	4-954-632-01	LEVER (JOINT)	
118	A-4660-167-A	SLIDER (BU CAM) ASSY	
* 119	4-928-473-01	INSULATOR	
M102	A-4460-232-A	MOTOR (CDM) ASSY	
M103	A-4460-232-A	MOTOR (CDM) ASSY	
S102	1-466-819-11	ENCORDER, ROTARY	

5-4. OPTICAL PICK-UP SECTION (BU-5BD3)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	4-917-565-01	SHAFT, SLED	
152	4-951-940-01	INSULATOR (BU)	
153	4-917-567-01	GEAR (M)	
154	4-917-564-01	GEAR (P), FLATNESS	
⚠155	8-848-144-11	DEVICE, OPTICAL KSS-240A	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
* 157	A-4617-371-A	BD BOARD, COMPLETE	
M1	X-4917-523-3	MOTOR ASSY, SPINDLE	
M2	X-4917-504-1	MOTOR ASSY, SLED	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

SECTION 6
ELECTRICAL PARTS LIST

BD

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA . . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. . uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- CND : Canadian model
- G : Germany model
- IT : Italian model

Ref. No.	Part No.	Description			Remark
*	A-4617-371-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C103	1-126-163-11	ELECT	4.7uF	20%	50V
C104	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C105	1-126-154-11	ELECT	47uF	20%	6.3V
C106	1-126-154-11	ELECT	47uF	20%	6.3V
C107	1-126-154-11	ELECT	47uF	20%	6.3V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C111	1-131-367-00	TANTALUM	22uF	10%	20V
C112	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C113	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C114	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C115	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C117	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C118	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C119	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C120	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C151	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C152	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C153	1-163-006-11	CERAMIC CHIP	560PF	10%	50V
C154	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C155	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C171	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C172	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C173	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-053-73	IC CXA1372AQ			
IC102	8-759-822-36	IC LA6532M			
		< JUMPER RESISTOR >			
J101	1-216-295-00	METAL CHIP	0	5%	1/10W
J102	1-216-295-00	METAL CHIP	0	5%	1/10W
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR DTC144EK			
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
R102	1-216-095-00	METAL CHIP	82K	5%	1/10W
R103	1-216-091-00	METAL CHIP	56K	5%	1/10W
R104	1-216-099-00	METAL CHIP	120K	5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R108	1-216-105-00	METAL CHIP	220K	5%	1/10W
R109	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R110	1-216-049-00	METAL CHIP	1K	5%	1/10W
R111	1-216-049-00	METAL CHIP	1K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R114	1-216-105-00	METAL CHIP	220K	5%	1/10W
R152	1-216-073-00	METAL CHIP	10K	5%	1/10W
R153	1-216-085-00	METAL CHIP	33K	5%	1/10W
R154	1-216-085-00	METAL CHIP	33K	5%	1/10W
R155	1-216-093-00	METAL CHIP	68K	5%	1/10W
R156	1-216-081-00	METAL CHIP	22K	5%	1/10W
R157	1-216-079-00	METAL CHIP	18K	5%	1/10W
R158	1-216-079-00	METAL CHIP	18K	5%	1/10W
R159	1-216-079-00	METAL CHIP	18K	5%	1/10W
R160	1-216-049-00	METAL CHIP	1K	5%	1/10W
R171	1-216-001-00	METAL CHIP	10	5%	1/10W
R172	1-216-001-00	METAL CHIP	10	5%	1/10W
R173	1-216-001-00	METAL CHIP	10	5%	1/10W
R174	1-216-001-00	METAL CHIP	10	5%	1/10W

BD CDM

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV101	1-238-600-11	RES, ADJ, CARBON 10K			
RV101	1-241-630-11	RES, ADJ, CARBON 10K			
RV102	1-238-600-11	RES, ADJ, CARBON 10K			
RV102	1-241-630-11	RES, ADJ, CARBON 10K			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)			
**********					
*	A-4649-352-A	CDM BOARD, COMPLETE (EXCEPT AEP, UK, G, IT)			
*	A-4649-463-A	CDM BOARD, COMPLETE (G)			
*	A-4649-466-A	CDM BOARD, COMPLETE (AEP, UK, IT)			
		**********			
*	4-942-204-01	PLATE, GROUND			
		< CAPACITOR >			
C212	1-164-346-11	CERAMIC CHIP	1uF		16V
C213	1-164-346-11	CERAMIC CHIP	1uF		16V
C214	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C215	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C216	1-125-486-11	DOUBLE LAYERS	0.22F		5.5V
C217	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C218	1-164-346-11	CERAMIC CHIP	1uF		16V
C219	1-164-346-11	CERAMIC CHIP	1uF		16V
C220	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C221	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C222	1-164-346-11	CERAMIC CHIP	1uF		16V
C223	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C224	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C225	1-164-346-11	CERAMIC CHIP	1uF		16V
C226	1-164-346-11	CERAMIC CHIP	1uF		16V
C227	1-164-346-11	CERAMIC CHIP	1uF		16V
C228	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C229	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C230	1-163-227-11	CERAMIC CHIP	10PF	5%	50V
C231	1-164-346-11	CERAMIC CHIP	1uF		16V
C232	1-164-346-11	CERAMIC CHIP	1uF		16V
C233	1-164-346-11	CERAMIC CHIP	1uF		16V
C234	1-164-346-11	CERAMIC CHIP	1uF		16V
C235	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C236	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C237	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C238	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C241	1-164-346-11	CERAMIC CHIP	1uF		16V
C242	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C243	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C244	1-164-346-11	CERAMIC CHIP	1uF		16V
C245	1-164-346-11	CERAMIC CHIP	1uF		16V
C250	1-126-405-11	ELECT CHIP	10uF	20%	50V
C252	1-126-924-11	ELECT	330uF	20%	10V
C253	1-126-923-11	ELECT	220uF	20%	10V
		< CONNECTOR >			
* CN202	1-695-629-11	CONNECTOR, FFC/FPC (ZIF) 22P			
CN203	1-580-891-11	SOCKET, CONNECTOR (SMT) 22P			
* CN206	1-568-951-11	PIN, CONNECTOR 2P			
* CN208	1-573-275-11	PIN, CONNECTOR 5P			
CN209	1-506-468-11	PIN, CONNECTOR 3P			
CN210	1-506-468-11	PIN, CONNECTOR 3P			
CN211	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D205	8-719-990-39	DIODE	DCB010		
D206	8-719-210-33	DIODE	EC10DS2		
D207	8-719-210-33	DIODE	EC10DS2		
D208	8-719-210-33	DIODE	EC10DS2		
		< FUSE >			
⚠F201	1-532-775-11	FUSE, MICRO (SECONDARY) 125V, 0.8A (EXCEPT AEP, UK, G, IT)			
		< IC >			
IC206	8-759-512-81	IC	LH5160N-10L		
IC207	8-759-008-79	IC	MC14011BF		
IC208	8-759-009-21	IC	MC14093BF		
IC209	8-752-337-26	IC	CXD2500AQ		
IC210	8-752-337-10	IC	CXD2554M		
IC211	8-759-506-63	IC	PCM67U		
IC212	8-759-636-55	IC	M5218AFP		
IC214	8-759-501-73	IC	BA6418N		
IC215	8-759-501-73	IC	BA6418N		
IC216	8-759-501-73	IC	BA6418N		
IC250	8-759-076-35	IC	uPD75516GF-399-3B9		
		< IC LINK >			
⚠ICP201	1-532-838-21	LINK, IC 0.3A (AEP, UK, G, IT)			
		< JUMPER RESISTOR >			
JR202	1-216-295-00	METAL CHIP	0	5%	1/10W
JR204	1-216-295-00	METAL CHIP	0	5%	1/10W
JR207	1-216-295-00	METAL CHIP	0	5%	1/10W
		< COIL >			
L201	1-410-385-11	INDUCTOR CHIP	22uH		
L202	1-410-385-11	INDUCTOR CHIP	22uH		

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Ref. No.	Part No.	Description			Remark
L203	1-410-385-11	INDUCTOR CHIP	22uH		
L205	1-410-385-11	INDUCTOR CHIP	22uH		
		< TRANSISTOR >			
Q201	8-729-804-41	TRANSISTOR	2SB1122-S		
Q202	8-729-602-21	TRANSISTOR	2SC4154-F		
		< RESISTOR >			
R202	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R203	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R204	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R205	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W
R208	1-216-073-00	METAL CHIP	10K	5%	1/10W
R209	1-216-073-00	METAL CHIP	10K	5%	1/10W
R210	1-216-073-00	METAL CHIP	10K	5%	1/10W
R211	1-216-073-00	METAL CHIP	10K	5%	1/10W
R212	1-216-073-00	METAL CHIP	10K	5%	1/10W
R213	1-216-073-00	METAL CHIP	10K	5%	1/10W
R214	1-216-073-00	METAL CHIP	10K	5%	1/10W
R215	1-216-073-00	METAL CHIP	10K	5%	1/10W
R216	1-216-073-00	METAL CHIP	10K	5%	1/10W
R217	1-216-073-00	METAL CHIP	10K	5%	1/10W
R218	1-216-073-00	METAL CHIP	10K	5%	1/10W
R219	1-216-073-00	METAL CHIP	10K	5%	1/10W
R220	1-216-073-00	METAL CHIP	10K	5%	1/10W
R221	1-216-049-00	METAL CHIP	1K	5%	1/10W
R222	1-216-073-00	METAL CHIP	10K	5%	1/10W
R223	1-216-073-00	METAL CHIP	10K	5%	1/10W
R224	1-216-073-00	METAL CHIP	10K	5%	1/10W
R225	1-216-073-00	METAL CHIP	10K	5%	1/10W
R226	1-216-073-00	METAL CHIP	10K	5%	1/10W
R227	1-216-073-00	METAL CHIP	10K	5%	1/10W
R228	1-216-073-00	METAL CHIP	10K	5%	1/10W
R229	1-216-073-00	METAL CHIP	10K	5%	1/10W
R230	1-216-073-00	METAL CHIP	10K	5%	1/10W
R231	1-216-073-00	METAL CHIP	10K	5%	1/10W
R232	1-216-073-00	METAL CHIP	10K	5%	1/10W
R233	1-216-073-00	METAL CHIP	10K	5%	1/10W
R234	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R235	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R236	1-216-073-00	METAL CHIP	10K	5%	1/10W
R237	1-216-073-00	METAL CHIP	10K	5%	1/10W
R238	1-216-049-00	METAL CHIP	1K	5%	1/10W
R239	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R240	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R242	1-216-073-00	METAL CHIP	10K	5%	1/10W
R243	1-216-097-00	METAL CHIP	100K	5%	1/10W
R244	1-216-041-00	METAL CHIP	470	5%	1/10W
R245	1-216-041-00	METAL CHIP	470	5%	1/10W
R246	1-216-041-00	METAL CHIP	470	5%	1/10W
R247	1-216-041-00	METAL CHIP	470	5%	1/10W
R248	1-216-033-00	METAL CHIP	220	5%	1/10W
R249	1-216-041-00	METAL CHIP	470	5%	1/10W
R250	1-216-041-00	METAL CHIP	470	5%	1/10W
R251	1-216-041-00	METAL CHIP	470	5%	1/10W
R252	1-216-041-00	METAL CHIP	470	5%	1/10W
R253	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R254	1-216-064-00	METAL CHIP	4.3K	5%	1/10W
R255	1-216-105-00	METAL CHIP	220K	5%	1/10W
R256	1-216-105-00	METAL CHIP	220K	5%	1/10W
R257	1-216-013-00	METAL CHIP	33	5%	1/10W
R258	1-216-033-00	METAL CHIP	220	5%	1/10W
R259	1-216-033-00	METAL CHIP	220	5%	1/10W
R260	1-216-073-00	METAL CHIP	10K	5%	1/10W
R261	1-216-073-00	METAL CHIP	10K	5%	1/10W
⚠R262	1-249-397-11	CARBON	22	5%	1/4W F
⚠R263	1-249-397-11	CARBON	22	5%	1/4W F
R264	1-216-043-00	METAL CHIP	560	5%	1/10W
R265	1-216-043-00	METAL CHIP	560	5%	1/10W
R266	1-216-073-00	METAL CHIP	10K	5%	1/10W
R267	1-216-073-00	METAL CHIP	10K	5%	1/10W
R268	1-216-049-00	METAL CHIP	1K	5%	1/10W
R269	1-216-025-00	METAL CHIP	100	5%	1/10W
R270	1-216-025-00	METAL CHIP	100	5%	1/10W
R271	1-216-025-00	METAL CHIP	100	5%	1/10W
R272	1-216-025-00	METAL CHIP	100	5%	1/10W
R273	1-216-025-00	METAL CHIP	100	5%	1/10W
		< TEST PIN >			
* TP201	1-695-630-11	PIN, CONNECTOR 6P			
		< VIBRATOR >			
X201	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)			
X202	1-567-908-11	VIBRATOR, CRYSTAL (16MHz)			

****

*	1-645-607-11	CDM MOTOR BOARD			
		**********			
		< CAPACITOR >			
C101	1-164-159-11	CERAMIC	0.1uF		50V
C102	1-164-159-11	CERAMIC	0.1uF		50V
C103	1-164-159-11	CERAMIC	0.1uF		50V

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CDM MOTOR | PANEL

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CN105	1-568-934-11	PIN, CONNECTOR 7P			
* CN106	1-568-954-11	PIN, CONNECTOR 5P			
		< IC >			
IC401	8-759-071-52	IC ON1023-S			
IC601	8-759-071-52	IC ON1023-S			
		< RESISTOR >			
⚠R401	1-249-407-11	CARBON	150	5% 1/4W F	
R402	1-249-429-11	CARBON	10K	5% 1/4W	
⚠R601	1-249-407-11	CARBON	150	5% 1/4W F	
R602	1-249-429-11	CARBON	10K	5% 1/4W	
		< SWITCH >			
S101	1-571-300-21	SWITCH, ROTARY (BU UP/DOWN)			
S103	1-692-080-11	SWITCH, PUSH (1 KEY) (TRAY OUT)			
S104	1-692-080-11	SWITCH, PUSH (1 KEY) (TRAY IN)			
**********					
*	A-4649-455-A	PANEL BOARD, COMPLETE (EXCEPT AEP, UK, G, IT)			
*	A-4649-462-A	PANEL BOARD, COMPLETE (G)			
*	A-4649-465-A	PANEL BOARD, COMPLETE (AEP, UK, IT)			
		**********			
*	4-954-701-01	HOLDER (FL TUBE)			
		< CAPACITOR >			
C301	1-164-346-11	CERAMIC CHIP	1uF	16V	
C302	1-164-346-11	CERAMIC CHIP	1uF	16V	
C303	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V	
C304	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C305	1-164-346-11	CERAMIC CHIP	1uF	16V	
C306	1-164-346-11	CERAMIC CHIP	1uF	16V	
C307	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C308	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C309	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C310	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C311	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C312	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C313	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C314	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C315	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C316	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C317	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C318	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C319	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C320	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C321	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C322	1-163-035-00	CERAMIC CHIP	0.047uF	10% 25V	
C323	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C324	1-126-206-11	ELECT CHIP	100uF	20% 6.3V	
C325	1-126-206-11	ELECT CHIP	100uF	20% 6.3V	
C326	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C327	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
		< CONNECTOR >			
CN301	1-580-874-11	SOCKET, CONNECTOR (SMT) 22P			
		< DIODE >			
D301	8-719-990-39	DIODE DCB010			
D302	8-719-027-34	DIODE LN1361C (DISC 1)			
D303	8-719-027-34	DIODE LN1361C (DISC 1)			
D304	8-719-027-34	DIODE LN1361C (DISC 1)			
D305	8-719-027-34	DIODE LN1361C (DISC 2)			
D306	8-719-027-34	DIODE LN1361C (DISC 2)			
D307	8-719-027-34	DIODE LN1361C (DISC 2)			
D308	8-719-027-34	DIODE LN1361C (DISC 3)			
D309	8-719-027-34	DIODE LN1361C (DISC 3)			
D310	8-719-027-34	DIODE LN1361C (DISC 3)			
D311	8-719-027-34	DIODE LN1361C (DISC 4)			
D312	8-719-027-34	DIODE LN1361C (DISC 4)			
D313	8-719-027-34	DIODE LN1361C (DISC 4)			
D314	8-719-027-34	DIODE LN1361C (DISC 5)			
D315	8-719-027-34	DIODE LN1361C (DISC 5)			
D316	8-719-027-34	DIODE LN1361C (DISC 5)			
D317	8-719-023-03	DIODE LN1461C (DISC 1)			
D318	8-719-023-03	DIODE LN1461C (DISC 1)			
D319	8-719-023-03	DIODE LN1461C (DISC 2)			
D320	8-719-023-03	DIODE LN1461C (DISC 2)			
D321	8-719-023-03	DIODE LN1461C (DISC 3)			
D322	8-719-023-03	DIODE LN1461C (DISC 3)			
D323	8-719-023-03	DIODE LN1461C (DISC 4)			
D324	8-719-023-03	DIODE LN1461C (DISC 4)			
D325	8-719-023-03	DIODE LN1461C (DISC 5)			
D326	8-719-023-03	DIODE LN1461C (DISC 5)			
D327	8-719-029-95	DIODE TLN117			
		< FLUORESCENT INDICATOR >			
FL301	1-519-738-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC301	8-759-077-15	IC uPD75518GF-059-3B9			
IC302	8-759-077-16	IC M66004M4FP			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
		< COIL >			
L301	1-410-385-11	INDUCTOR CHIP	22uH		
L302	1-410-385-11	INDUCTOR CHIP	22uH		
		< TRANSISTOR >			
Q301	8-729-602-21	TRANSISTOR	2SC4154-F		
Q302	8-729-602-36	TRANSISTOR	2SA1602		
Q303	8-729-804-41	TRANSISTOR	2SB1122-S		
Q304	8-729-018-23	TRANSISTOR	TPS626-F		
Q306	8-729-602-21	TRANSISTOR	2SC4154-F		
Q307	8-729-602-21	TRANSISTOR	2SC4154-F		
Q308	8-729-602-21	TRANSISTOR	2SC4154-F		
Q309	8-729-602-21	TRANSISTOR	2SC4154-F		
Q311	8-729-602-21	TRANSISTOR	2SC4154-F		
Q312	8-729-602-21	TRANSISTOR	2SC4154-F		
Q313	8-729-602-21	TRANSISTOR	2SC4154-F		
		< RESISTOR >			
R301	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R302	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R303	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R304	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-073-00	METAL CHIP	10K	5%	1/10W
R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-073-00	METAL CHIP	10K	5%	1/10W
R310	1-216-073-00	METAL CHIP	10K	5%	1/10W
R311	1-216-073-00	METAL CHIP	10K	5%	1/10W
R312	1-216-089-00	METAL CHIP	47K	5%	1/10W
R313	1-216-073-00	METAL CHIP	10K	5%	1/10W
R314	1-216-073-00	METAL CHIP	10K	5%	1/10W
R315	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R316	1-216-049-00	METAL CHIP	1K	5%	1/10W
R317	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R318	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R319	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R320	1-216-017-00	METAL CHIP	47	5%	1/10W
R321	1-216-017-00	METAL CHIP	47	5%	1/10W
R322	1-216-017-00	METAL CHIP	47	5%	1/10W
R323	1-216-017-00	METAL CHIP	47	5%	1/10W
R324	1-216-017-00	METAL CHIP	47	5%	1/10W
R325	1-216-019-00	METAL CHIP	56	5%	1/10W
R326	1-216-019-00	METAL CHIP	56	5%	1/10W
R327	1-216-019-00	METAL CHIP	56	5%	1/10W
R328	1-216-019-00	METAL CHIP	56	5%	1/10W
R329	1-216-019-00	METAL CHIP	56	5%	1/10W
R330	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R331	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R332	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R333	1-216-073-00	METAL CHIP	10K	5%	1/10W
R335	1-216-049-00	METAL CHIP	1K	5%	1/10W
R336	1-216-049-00	METAL CHIP	1K	5%	1/10W
R337	1-216-079-00	METAL CHIP	18K	5%	1/10W
R340	1-216-027-00	METAL CHIP	120	5%	1/10W
R341	1-216-027-00	METAL CHIP	120	5%	1/10W
R342	1-216-027-00	METAL CHIP	120	5%	1/10W
R343	1-216-027-00	METAL CHIP	120	5%	1/10W
R344	1-216-027-00	METAL CHIP	120	5%	1/10W
R349	1-216-073-00	METAL CHIP	10K	5%	1/10W
R350	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-216-041-00	METAL CHIP	470	5%	1/10W
R352	1-216-041-00	METAL CHIP	470	5%	1/10W
R353	1-216-041-00	METAL CHIP	470	5%	1/10W
R354	1-216-041-00	METAL CHIP	470	5%	1/10W
R355	1-216-045-00	METAL CHIP	680	5%	1/10W
R356	1-216-045-00	METAL CHIP	680	5%	1/10W
R357	1-216-045-00	METAL CHIP	680	5%	1/10W
R358	1-216-045-00	METAL CHIP	680	5%	1/10W
R359	1-216-049-00	METAL CHIP	1K	5%	1/10W
R360	1-216-049-00	METAL CHIP	1K	5%	1/10W
R361	1-216-049-00	METAL CHIP	1K	5%	1/10W
R362	1-216-049-00	METAL CHIP	1K	5%	1/10W
R363	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R364	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R365	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R366	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R367	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R368	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R369	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R370	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R371	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R372	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R373	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R374	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R375	1-216-075-00	METAL CHIP	12K	5%	1/10W
R376	1-216-075-00	METAL CHIP	12K	5%	1/10W
R377	1-216-075-00	METAL CHIP	12K	5%	1/10W
R378	1-216-075-00	METAL CHIP	12K	5%	1/10W
R385	1-216-073-00	METAL CHIP	10K	5%	1/10W
R386	1-216-073-00	METAL CHIP	10K	5%	1/10W
R387	1-216-073-00	METAL CHIP	10K	5%	1/10W
R388	1-216-073-00	METAL CHIP	10K	5%	1/10W
R389	1-216-073-00	METAL CHIP	10K	5%	1/10W

PANEL | TRANSFORMER

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S301	1-692-296-11	SWITCH, KEY BOARD (▶▶ ▷▷)	
S302	1-692-296-11	SWITCH, KEY BOARD (◁◁ ◀◀)	
S303	1-692-296-11	SWITCH, KEY BOARD (■)	
S304	1-692-296-11	SWITCH, KEY BOARD (▷)	
S305	1-692-296-11	SWITCH, KEY BOARD (DISC 1)	
S306	1-692-296-11	SWITCH, KEY BOARD (⏏ DISC 1)	
S308	1-692-296-11	SWITCH, KEY BOARD (❚❚)	
S309	1-692-296-11	SWITCH, KEY BOARD (DISC 2)	
S310	1-692-296-11	SWITCH, KEY BOARD (⏏ DISC 2)	
S312	1-692-296-11	SWITCH, KEY BOARD (CONTINUE)	
S313	1-692-296-11	SWITCH, KEY BOARD (DISC 3)	
S314	1-692-296-11	SWITCH, KEY BOARD (⏏ DISC 3)	
S316	1-692-296-11	SWITCH, KEY BOARD (SHUFFLE)	
S317	1-692-296-11	SWITCH, KEY BOARD (DISC 4)	
S318	1-692-296-11	SWITCH, KEY BOARD (⏏ DISC 4)	
S320	1-692-296-11	SWITCH, KEY BOARD (PROGRAM)	
S321	1-692-296-11	SWITCH, KEY BOARD (DISC 5)	
S322	1-692-296-11	SWITCH, KEY BOARD (⏏ DISC 5)	
S324	1-692-296-11	SWITCH, KEY BOARD (REPEAT)	
S325	1-692-296-11	SWITCH, KEY BOARD (CHARATER ▷)	
S326	1-692-296-11	SWITCH, KEY BOARD (CHARATER ◁)	
S328	1-692-296-11	SWITCH, KEY BOARD (CURSOR)	
S329	1-692-296-11	SWITCH, KEY BOARD (MEMO INPUT)	
S330	1-692-296-11	SWITCH, KEY BOARD (ERASE)	
S331	1-692-296-11	SWITCH, KEY BOARD (TIME/MEMO)	
S332	1-692-296-11	SWITCH, KEY BOARD (SOUND FIELD FILE)	
		< VIBRATOR >	
X301	1-577-359-21	VIBRATOR, CERAMIC (4.19MHz)	
**********			
*	A-4649-456-A	TRANSFORMER BOARD, COMPLETE (EXCEPT AEP, UK, G, IT)	
*	A-4649-461-A	TRANSFORMER BOARD, COMPLETE (G)	
*	A-4649-464-A	TRANSFORMER BOARD, COMPLETE (AEP, UK, IT)	
		**********	
*	3-309-144-21	HEAT SINK	
	7-682-547-04	SCREW +BVTT 3X6 (S)	
		< CAPACITOR >	
C200	1-126-939-11	ELECT 10000uF 20% 16V	
C202	1-164-159-11	CERAMIC 0.1uF 50V	
C203	1-164-159-11	CERAMIC 0.1uF 50V	
C205	1-124-443-00	ELECT 100uF 20% 10V	
C206	1-161-375-00	CERAMIC 0.0022uF 20% 50V	
C207	1-164-159-11	CERAMIC 0.1uF 50V	
C208	1-124-443-00	ELECT 100uF 20% 10V	

Ref. No.	Part No.	Description	Remark
C209	1-164-159-11	CERAMIC 0.1uF 50V	
C210	1-164-159-11	CERAMIC 0.1uF 50V	
C211	1-124-443-00	ELECT 100uF 20% 10V	
C246	1-124-572-11	ELECT 100uF 20% 63V	
C247	1-124-907-11	ELECT 10uF 20% 50V	
C248	1-161-329-00	CERAMIC 0.0068uF 20% 16V	
C249	1-161-329-00	CERAMIC 0.0068uF 20% 16V	
C251	1-124-907-11	ELECT 10uF 20% 50V	
C254	1-124-902-00	ELECT 0.47uF 20% 50V	
C255	1-124-902-00	ELECT 0.47uF 20% 50V	
C256	1-124-907-11	ELECT 10uF 20% 50V	
C257	1-124-907-11	ELECT 10uF 20% 50V	
C258	1-162-282-31	CERAMIC 100PF 10% 50V	
		< CONNECTOR >	
* CN201	1-569-624-11	SOCKET, CONNECTOR 17P (SYSTEM CONTROL 2)	
* CN213	1-564-499-11	PIN, CONNECTOR 6P	
* CN216	1-562-327-00	SOCKET, CONNECTOR 3P	
		< DIODE >	
D201	8-719-210-21	DIODE 11EQS04	
D202	8-719-210-21	DIODE 11EQS04	
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-014-86	DIODE UZP-6.8BB	
D206	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC201	8-759-604-86	IC M5F7807L	
IC202	8-759-604-30	IC M5F7808L	
IC203	8-759-821-93	IC LA5601	
IC204	8-759-821-93	IC LA5601	
IC213	8-759-633-42	IC M5293L	
		< RESISTOR >	
⚠R201	1-249-393-11	CARBON 10 5% 1/4W F	
⚠R202	1-249-405-11	CARBON 100 5% 1/4W F	
		< TRANSFORMER >	
⚠T201	1-450-984-11	TRANSFORMER, POWER	
**********			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
11	1-696-633-11	WIRE (FLAT TYPE)	
78	1-452-676-11	MAGNET	
86	1-696-634-11	WIRE (FLAT TYPE)	
⚠155	8-848-144-11	DEVICE, OPTICAL KSS-240A	
156	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M1	X-4917-523-3	MOTOR ASSY, SPINDLE	
M2	X-4917-504-1	MOTOR ASSY, SLED	
M101	A-4660-232-A	MOTOR (CDM) ASSY	
M102	A-4460-232-A	MOTOR (CDM) ASSY	
M103	A-4460-232-A	MOTOR (CDM) ASSY	
S102	1-466-819-11	ENCORDER, ROTARY	

****

****
HARDWARE LIST
****

#1	7-682-546-04	SCREW +BVTT 3X5 (S)	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#3	7-624-106-04	STOP RING 3.0, TYPE -E	
#4	7-682-546-09	SCREW +PTT 3X5 (S)	
#5	7-685-645-79	SCREW +BTP 3X6 TYPE2 N-S	
#6	7-621-775-00	SCREW +B 2.6X3	
#7	7-621-255-35	SCREW +BVTT 2X5 (S)	
#8	7-621-773-95	SCREW +BVTT 2.6X6 (S)	
#9	7-685-531-14	SCREW +BTP 2.6X4 TYPE2 N-S	
#10	7-621-770-XX	SCREW +PTT 2.6X8 (S)	
#11	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S	
#12	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#13	7-621-255-15	SCREW +P 2X3	
#14	7-682-547-09	SCREW +BVTT 3X6 (S)	
#15	7-682-547-04	SCREW +BVTT 3X6 (S)	

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-957-394-11

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CDP-H3750

SONY®
SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Tourist Model

SUPPLEMENT-1

File this supplement-1 with the Service Manual.

Subject :

1. TEST MODE
2. BLOCK DIAGRAM
3. IC PIN DESCRIPTION

TEST MODE

1. Press the three keys: DISC1, DISC5 △ and ■ simultaneously to enter the Test Mode.

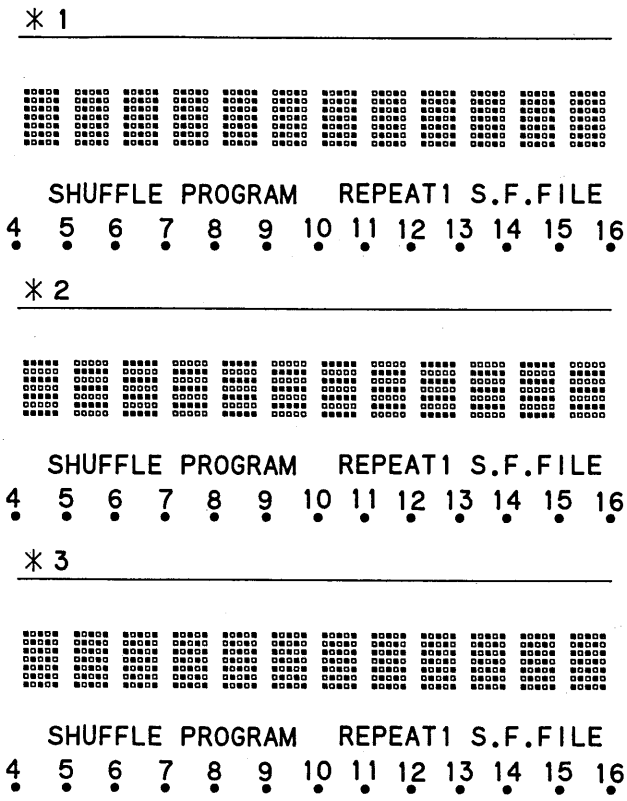
(1) FL Tube All Lighting

This mode is entered just after power is turned on.

(2) FL Tube Segment Check

This mode is entered when DISC1 △ key is pressed in mode (1).

Make sure that the mode changes from * 1 to * 2 to * 3 and then to * 1 and so on in turn each time DISC1 △ key is pressed.

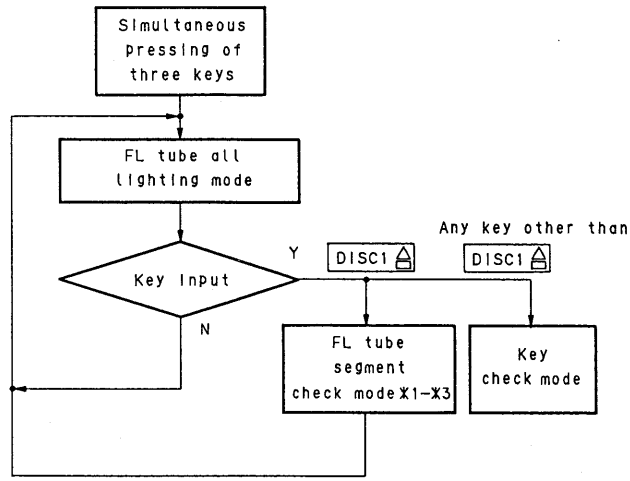

* 1
SHUFFLE PROGRAM REPEAT1 S.F.FILE
4 5 6 7 8 9 10 11 12 13 14 15 16
* 2
SHUFFLE PROGRAM REPEAT1 S.F.FILE
4 5 6 7 8 9 10 11 12 13 14 15 16
* 3
SHUFFLE PROGRAM REPEAT1 S.F.FILE
4 5 6 7 8 9 10 11 12 13 14 15 16

(3) Key Check

This mode is entered and "1" is displayed when and key other than DISC1 △ is pressed in mode (1). The number displayed is incremented each time any new key is pressed. Make sure that "7" is displayed when all the different keys have been pressed.

Note that once a key has been pressed, even if that key is pressed again, it is not be counted.

* To exit mode (2) and mode (3), press the three keys: DISC1, DISC5 △ and ■ simultaneously.

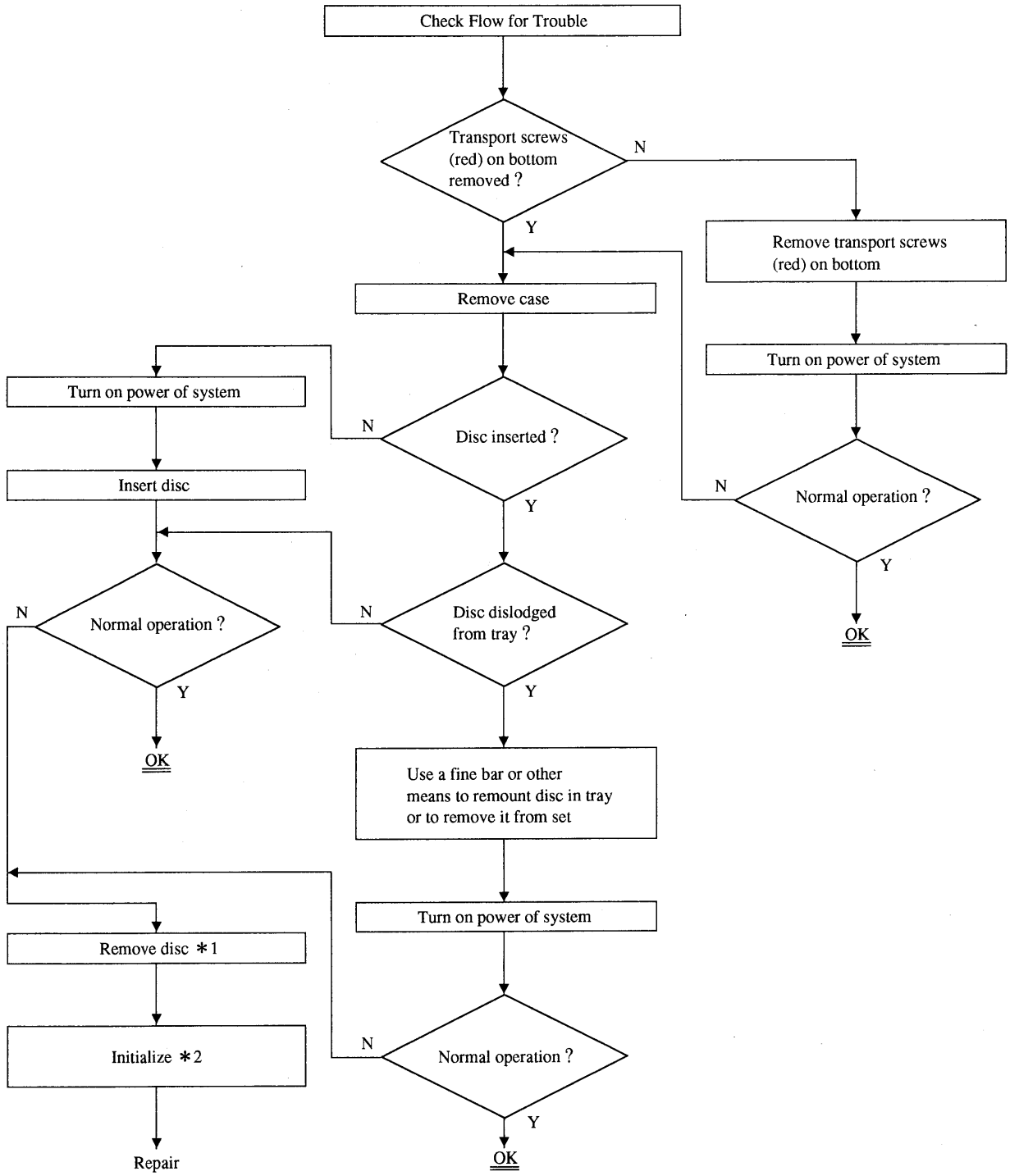


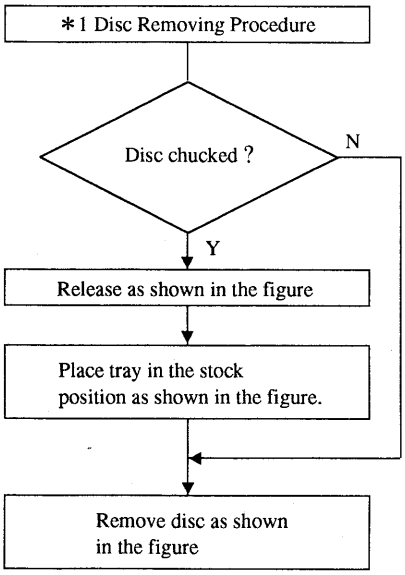
2. Test Mode for CD System Controller (IC250)

(1) ADJUST Mode

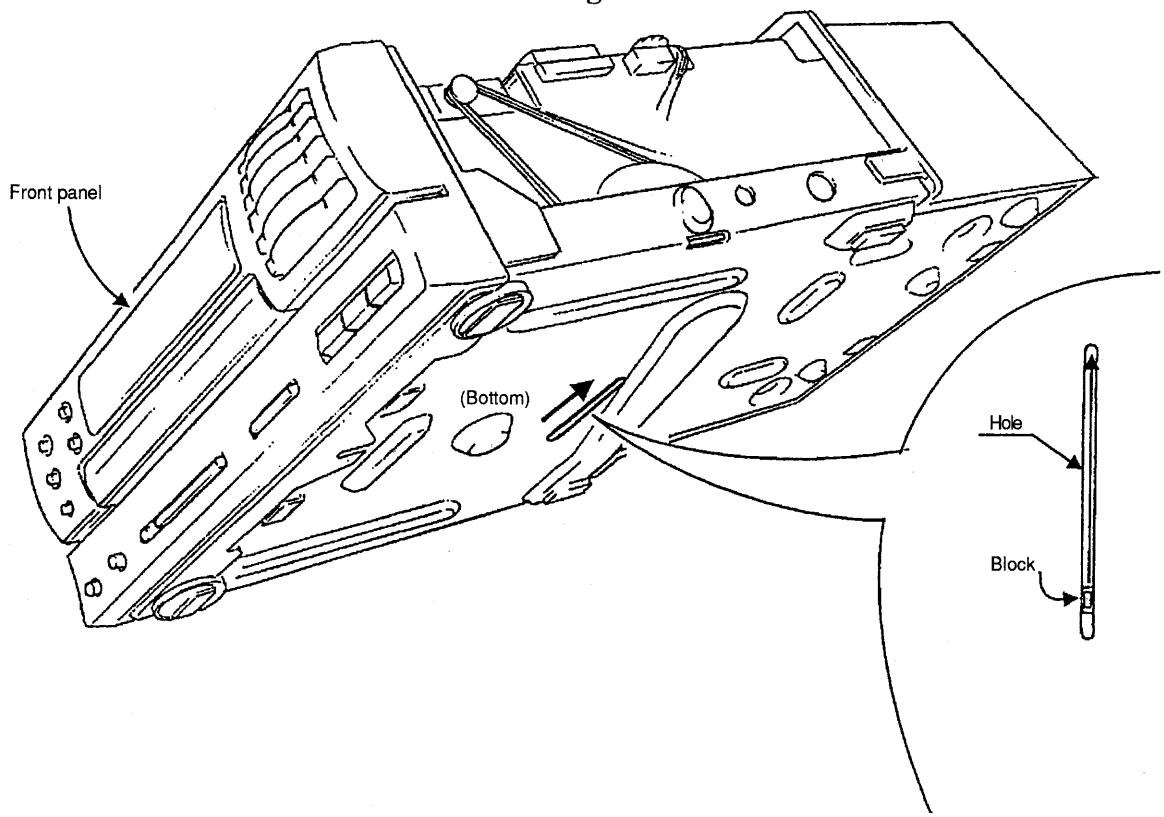
In this mode, the system looks like performing normal operation except that:

- When IC250 pin ㊸ (ADJ) is set "L" after power is turned on:
  - ① The system will not monitor GFS during PLAY, PAUSE and SEARCH. It will not STOP even if GFS remains "L" (NG).
  - ② No high speed feed is performed during SEARCH.
  - ③ Focus gain will be returned to normal during PLAY. (Usually, when focus is locked, the gain is decreased to redure noise.)
- When IC250 pin ㊾ (AFADJ) is set "L" after power is turned on:
  - ① CLV mode during PLAY will be CLV-S (rough servo) independent of the state of pin ⑲ (ADJ) as the CLV-S lock function.

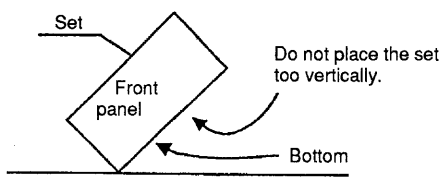

Check Flow for Trouble
Transport screws (red) on bottom removed ?
N
Y
Remove transport screws (red) on bottom
Turn on power of system
Normal operation ?
N
Y
OK
Remove case
Turn on power of system
Disc inserted ?
N
Y
Insert disc
Normal operation ?
N
Y
OK
Disc dislodged from tray ?
N
Y
Use a fine bar or other means to remount disc in tray or to remove it from set
Turn on power of system
Remove disc *1
Initialize *2
Repair
Normal operation ?
N
Y
OK

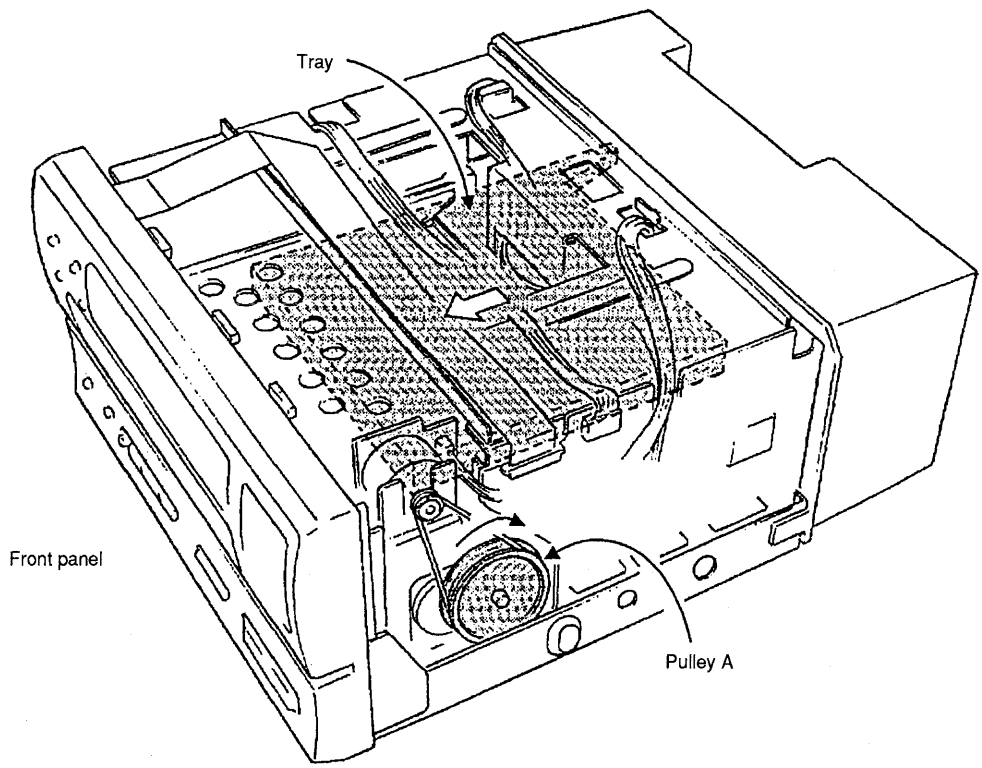

*1 Disc Removing Procedure
Disc chucked ?
N
Y
Release as shown in the figure
Place tray in the stock position as shown in the figure.
Remove disc as shown in the figure

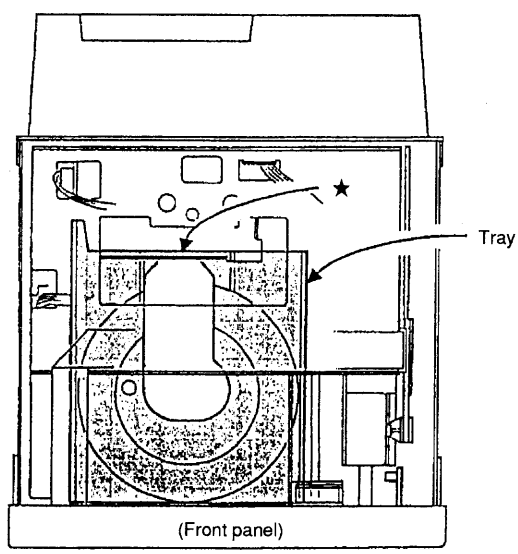
Disc Removing Procedure



1) Insert a fine bar into the hole and move the block in the arrow direction.
(If disc is chucked, to prevent fall of disc, place the set as illustrated below.)

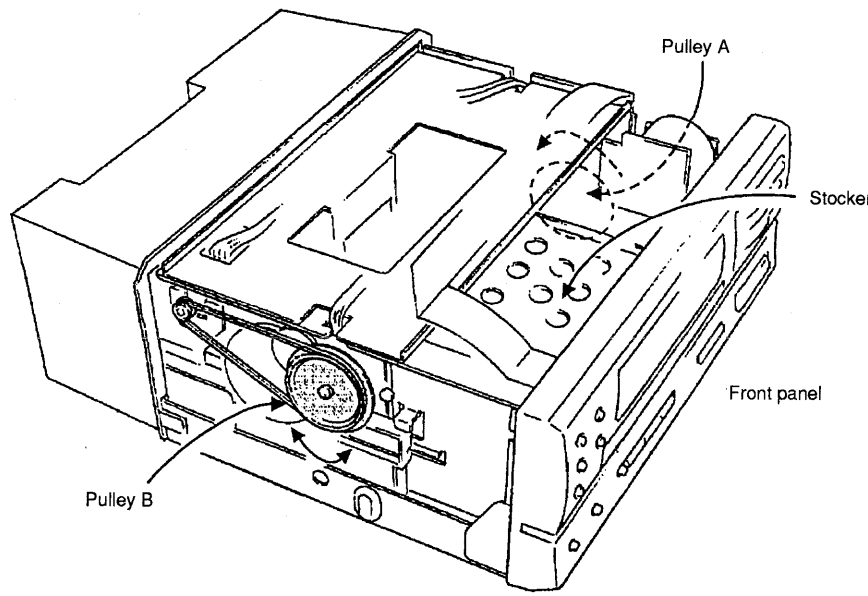




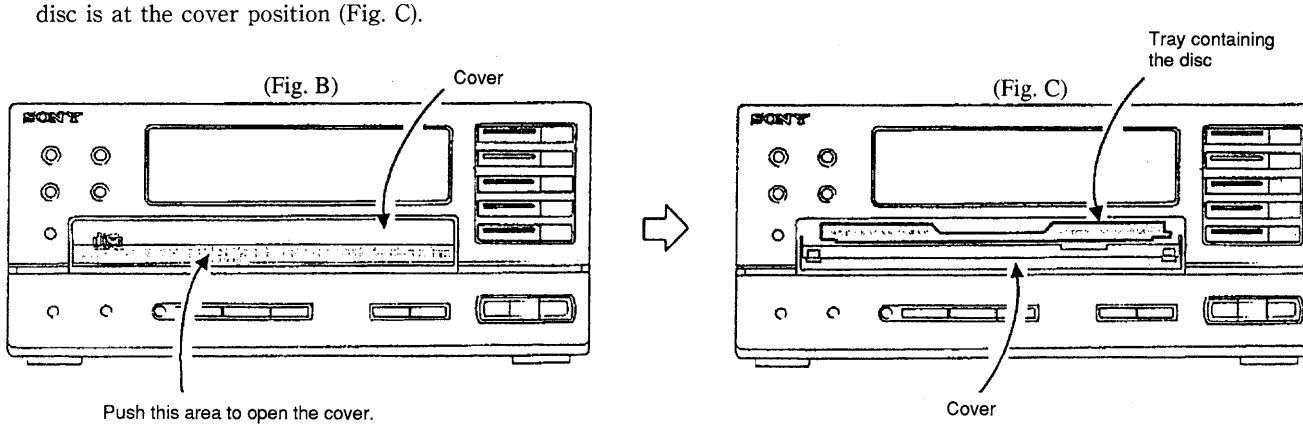


2) Rotate pulley A clockwise (↷). While observing the disc tray moves in the arrow (⇦) direction, move the tray until its rear is aligned with others (★ marked portion). (See Fig. A)

(Fig. A)



3) Rotating pulley B will move the stocker where disc trays are stocked up and down. Open the cover on the front panel (Fig. B) and adjust so that the tray containing the disc is at the cover position (Fig. C).



4) Rotating pulley A counterclockwise (↶) will eject the tray containing disc. Remove the disc, then rotate pulley A clockwise to return the tray to the position as shown in Fig. A.

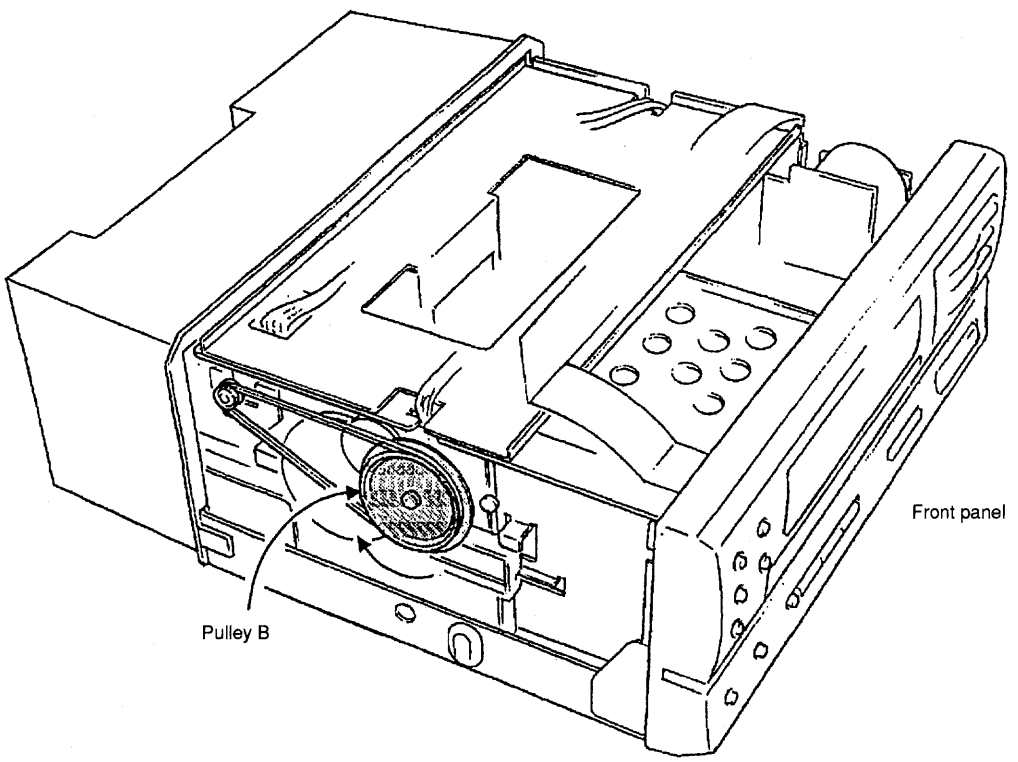
- If some trays contain disc, repeat Items 3) and 4).

* 2 Initializing Procedure

1) If mechanism is operated when power of system is turned on :
Make sure that all disc are removed. Open DISC No. 1.
↓
Turn off power of system.
↓
"OFF" characters flash on the CD display.
↓

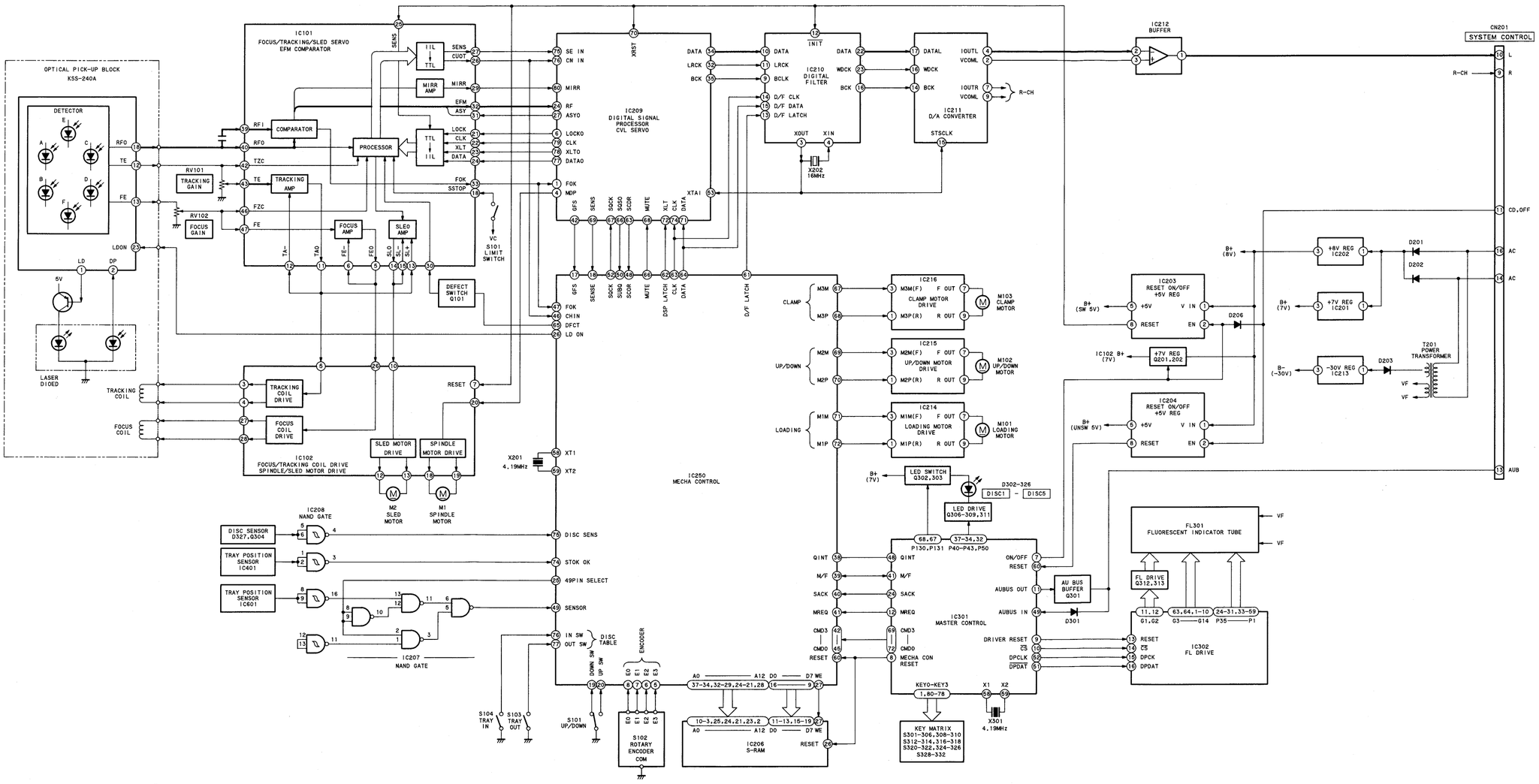
2) If mechanism is operated when power of system is turned on :
Move disc tray as shown in the figure.

Initializing Procedure



* Make sure that all the trays are arranged to the position shown in Fig. A, then rotate pulley B in the arrow direction until it stops.

BLOCK DIAGRAM



IC PIN DESCRIPTION

• IC250 μPD75516GF-399-3B9 Mechanism Controller Microprocessor

For operations with the CD unit's IC101 (RF signal processing and servo), IC209 (DSP and digital filter) loading control, IC206 (SRAM), and data exchange with IC301 (master controller).

Pin No.	Pin Name	I/O	Description
1	NC		No connect pin
2	AVDD	—	Power pin (+5V)
3, 4	VDD	—	Power pin (+5V)
5—8	E3—0	I	Stocker position detection encoder input (4-bit parallel decoder). * 1
9—16	D7—0	O	Data output port of IC206 (64K SRAM) (8-bit parallel data).
17	GFS	I	GFS signal input from IC209 (CXD2500BQ). "L" for NG, "H" for OK.
18	SENSE	I	SENS input from IC101 (CXD1372Q) and IC209 (CXD2500BQ).
19	$\overline{\text{DOWN SW}}$	I	Down input of S101 (BD Up and Down switch).
20	$\overline{\text{UP SW}}$	I	Up input of S101 (BD Up and Down switch).
21—24	A11—8	O	IC106 (64K SRAM) address output port.
25	49 PIN SELECT	O	Pin ㊾ function select. Always "L" for use of Stock IN in this set.
26	LD ON	O	BD laser diode control output. "H" to toggle ON, "L" to toggle OFF.
27	WE	O	IC206 (64K SRAM) write enable output. "H" to disable, "L" to enable.
28—32	A12, A7—4	O	IC206 (64K SRAM) address output port.
33	GND	—	Power pin (GND)
34—37	A3—0	O	IC206 (64K SRAM) address output port.
38	QINT	I/O	Interrupt signal output during communication with master controller. * 2
39	M/$\overline{\text{F}}$	I/O	To determine type of communication with master controller. "H" for mechanism command data, "L" for file command data.
40	SACK	I/O	Answer code input from master controller during communication with master.
41	MREQ	I/O	Master request signal input for communication with master controller.
42—45	CMD3—0	I/O	Command data line in communication with master controller.
46	CHIN	I	Track jump count input from IC101 (CXD1372Q).
47	FOK	I	Focus OK signal input from IC101 (CXD1372Q). "H" for OK.
48	SCOR	I	Sub code sink S0+S1 detection input from IC209 (CXD2500BQ).
49	SENSER	I	STOK IN signal input in this set.
50	SUBQ	I	Sub code Q data input from IC209 (CXD2500BQ).
51	GND	—	Power pin (GND)
52	SQCK	O	Sub code Q data read clock output to IC209 (CXD2500BQ).
53	$\overline{\text{ADJ}}$	I	Test Mode input. "L" to enter Test Mode.
54	GND	—	Power pin (GND)
55	XT1	—	Not used (GND)
56	XT2	—	Not used (Open)
57	GND	—	Power pin (GND)
58, 59	X1, 2	I	System clock input (4.19MHz)
60	$\overline{\text{RESET}}$	I	System clock input. "L" to reset.
61	D/F LATCH	O	IC210 (MSM6538) latch signal output.
62	DSP LATCH	O	IC209 (CXD2500BQ) latch signal output.
63	CLK	O	Clock data output to IC210 (MSM6538).

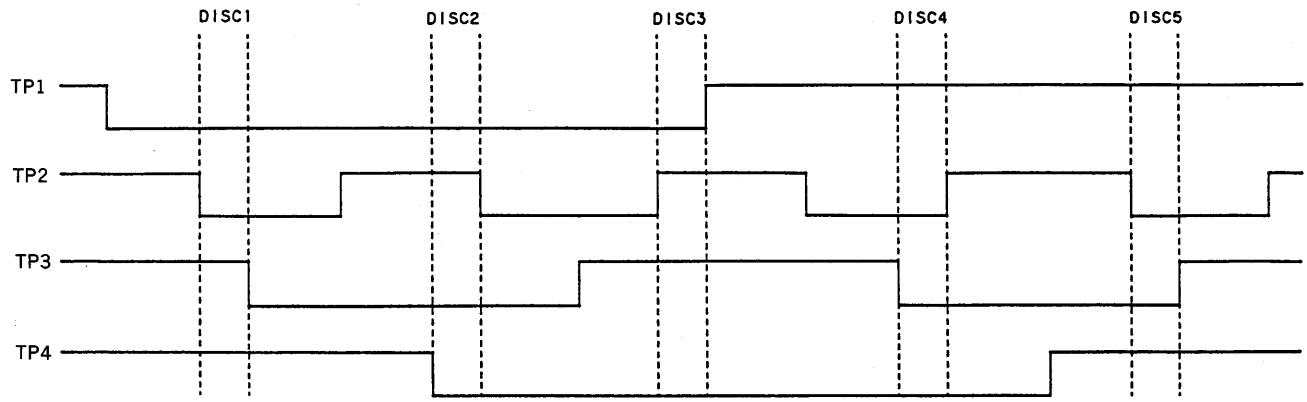
Pin No.	Pin Name	I/O	Description
64	DATA	O	Data output to IC210 (MSM6538).
65	DFCT SW	O	Used during focus search to turn OFF (set "H") flaw detection circuit of ON/OFF select output DISC in DEFECT circuit of IC101 (CXD1372Q).
66	MUTE	O	Muting control output. "H" to mute.
67	M3M	O	Clamp motor control output
68	M3P	O	
69	M2M	O	Stocker motor control output
70	M2P	O	
71	M1M	O	Loading motor control output
72	M1P	O	
73	AGND	—	Power pin (GND)
74	STOK OK	I	Tray position detection input. "L" for stocker UP/DOWN enabled position.
75	DISC SENS	I	Used to determine whether disc is present or not. "⊓": With, "—": Without
76	$\overline{\text{IN SW}}$	I	S103 (Loading In switch) input
77	$\overline{\text{OUT SW}}$	I	S104 (Loading Out switch) input
78	$\overline{\text{TEST}}$	I	Test Mode input. "L" for Test Mode.
79	$\overline{\text{AF ADJ}}$	I	
80	NC		No connect pin

	UP	DOWN	BREAK
P	H	L	H
M	L	H	H

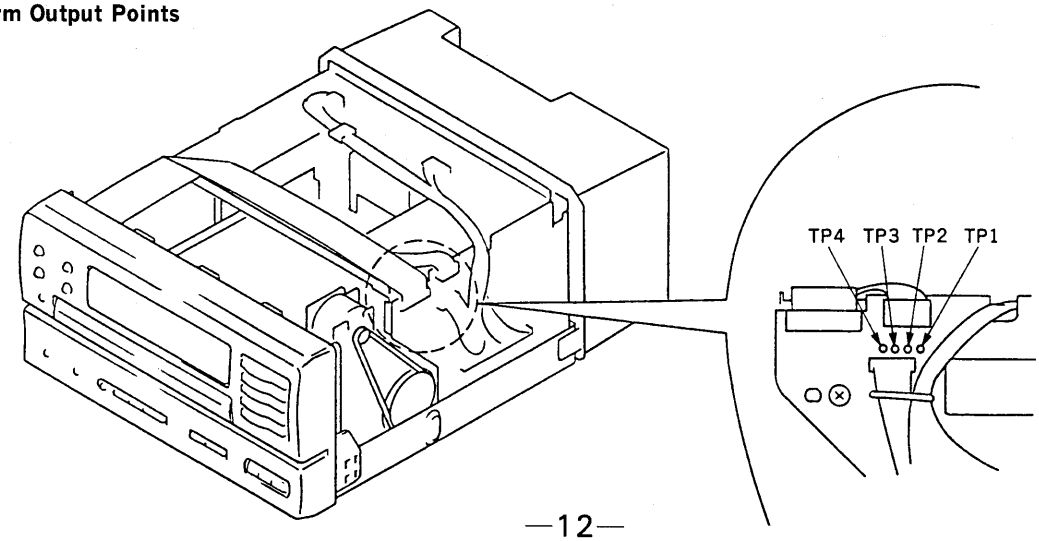
	UP	DOWN	BREAK
P	H	L	H
M	L	H	H

	OUT	IN	BREAK
P	H	L	H
M	L	H	H

* 1 Encoder output waveform from DISC1 to DISC5



Waveform Output Points



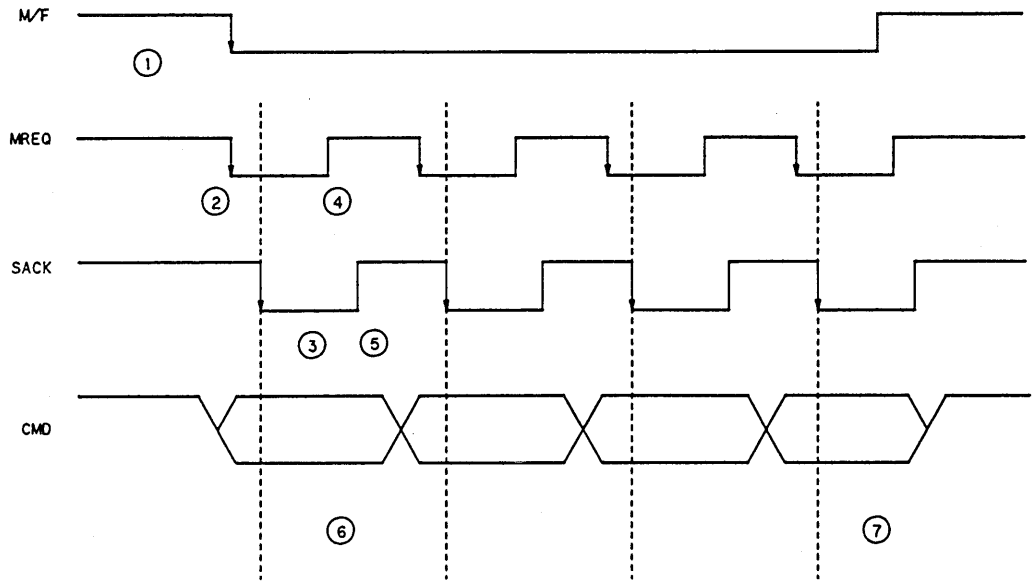
* 2 Communications between mechanism microprocessor IC250 and master microprocessor IC301
Format in general communications.....(1) and (2)

Initial Communication

Initial communication is made between mechanism microprocessor IC250 and master microprocessor IC301 in their respective initial routines. This has a different format from general communications. Handshake is performed in MTREQ and SACK. If any fault occurs in initial communication, the communication stops at that points, so the indicator remains extinguished.

(1) Command Receive and Transmission
Communications between mechanism controller and master controller are made using eight signal lines between their ports (CMD1, CMD2, CMD3, CMD4, MREQ, SACK, M/F and QINT).

Format of Receive and Transmission from Master

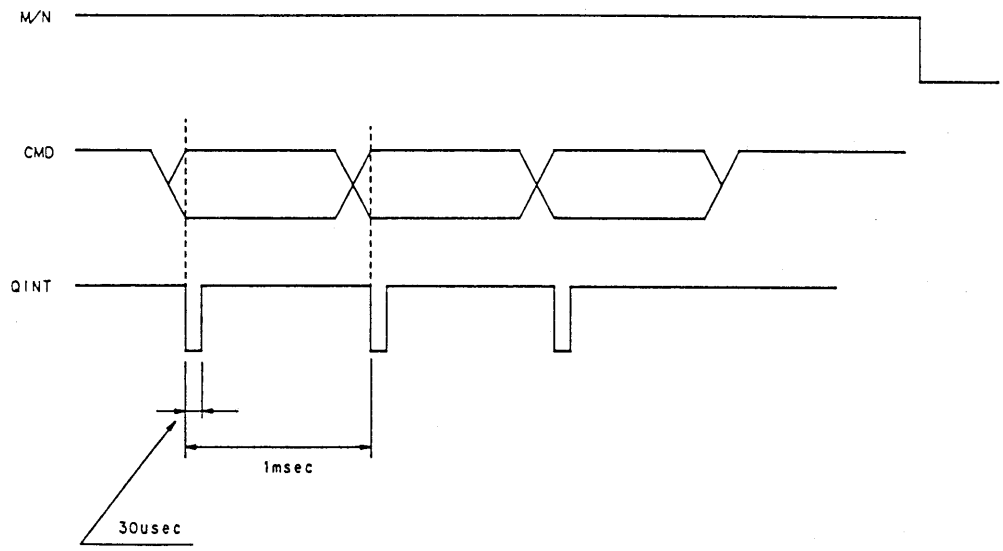


Timing of transmit from master controller to mechanism controller

① M/F pin is to be set "High" when master microprocessor sends mechanism command and "Low" when it sends a file command. Mechanism controller will not make Q data communication when M/F pin is "Low".
② When sending a command from master microprocessor to mechanism controller, the data is put on the CMD line and this pin (MREQ) is set "Low".
③ Mechanism controller monitors the MREQ pin in its main routine. It latches the CMD data when the pin is at "Low" level. Then, it sets this pin (SACK) "Low".
④ Master controller confirms that the SACK pin is set "Low" and it sets the MREQ pin "High".
⑤ Then, when the MREQ pin is "High" and the SACK pin is "Low", mechanism controller sets the SACK "High" and it is ready to accept the send command.
⑥ The signal from master begins with "A"—"E". If the mechanism controller receives any code other than this, it treats as an error.
⑦ This signal ends with "F". After this is confirmed, the flag is set and the command is then decoded in the main routine.

(2) Format of Transmission to Master

The QINT pin, M/F pin and MD port are used to send a command to master microprocessor. This transmission from mechanism controller to master microprocessor is used for responses to DISC status information, SW state and file information. Also, the same transmission format is used to send Q data from mechanism controller to master.



When data can be sent from mechanism controller, the data is then sent to the CMD line. Therefore the QINT pin of mechanism controller is dropped by about 30μsec.

The timing of data transmission is controlled by timer process within microprocessor so that data will be sent at intervals of 1 msec.

The QINT pin of master controller is an interrupt port, so data sent from mechanism controller is to be received.

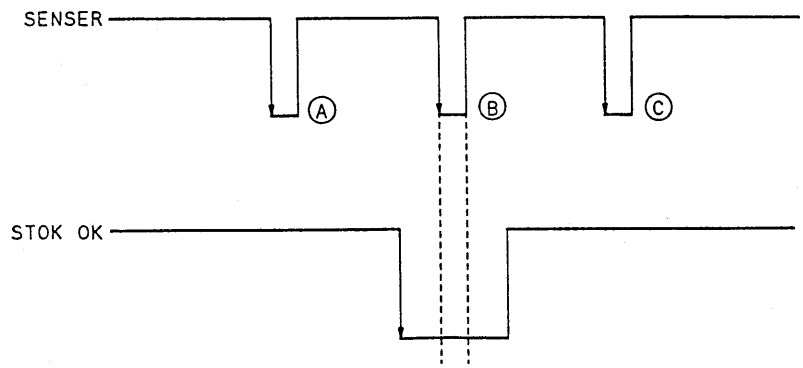
Any request from master microprocessor (MREQ pin "Low") during data transmission to master will take first priority in processing.

Basic Condition of Mechanism Controller

Mechanism controller takes precedence over instruction from master microprocessor.

(3) Timing at Pins ㊾ and ㊹ of IC250

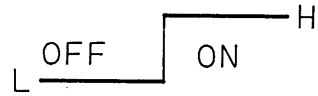
Waveform at SENSER (IC250 pin ㊾) and STOK OK (IC250 pin ㊹) when tray is OPEN/CLOSE



As shown above, the center pulse (Ⓑ) of SENSER mute fall within the pulse of STOK OK when tray is OPEN/CLOSE. If any of the pulses on both sides (Ⓐ and Ⓒ) of SENSER is input for BOX UP/DOWN, the mechanism microprocessor reduces the tray speed, stops in the position (Ⓑ) and allows UP/DOWN movement.

If there is any abnormality in the OPEN/CLOSE relationship, these two waveforms should be checked.

• IC301 μPD75518GF-059-3B9

Pin No.	Signal	Pin Name	Description
1	AN0	KEY0	KEY analog input
2	AVREF		+5V
3, 4	VDD		
5	P113		Open
6	P112	DRIVER	Driver reset
7	P111	ICON OFF	Servo system ON/OFF 
8	P110	MEC REST	Mechanism controller reset
9	P103		Open
10	P102	$\overline{CS}$	Driver chip select
11	P101	BUS OUT	Audio bus output port
12	P100	$\overline{MREQ}$	For communication with mechanism controller, and master request.
13	P93	AUB/$\overline{SIR}$	Switching between BUS and SIRCS (no function)
14	P92	$\overline{TEST}$	This pin is set "L" and POWER is ON to display the accident code
15	P91	$\overline{SUF, REP}$	This pin is set "L" to operate ALL DISCS SHUFFLE REPT
16	P90	SFIL/$\overline{EDT}$	This pin is set "L" to change S. F. FILE key to EDIT key
17—20	P83—80		+5V
21—23	P73—71		+5V
24	P70	SACK	For communication with mechanism controller, and Answer Code from master.
25—28	P63—60		Open
24—31	P53—51		
32	P50	LED4	LED data
33	VSS		GND
34—37	P43—40	LED3—0	LED data
38—40	P23—20		Open
46, 47	P13, 12		GND
48	INT1	QINT	Interrupt from mechanism controller
49	INT0	BUSIN	Interrupt of audio bus
50	P03		+5V
51	SO0	DPDAT	Output as serial port, used as serial clock to send displayed data to driver.
52	SCK0	DPCK	
53	P00		GND
54	VSS		GND
55	XT1		GND
56	XT2		Open
57	IC		GND
58	X1		4.19MHz oscillator
59	X2		
60	$\overline{RESET}$		Reset input for this microprocessor

Pin No.	Signal	Pin Name	Description
61—64	P143—140		Open
65, 66	P133, 132		
67, 68	P131, 130	LEDG1, 0	LED digital 1, 0.
69—72	P123—120	CMD3—0	Communication with mechanism controller (data 3—0)
73	AVSS		GND
74—77	P153—150		GND
78—80	AN3—1	KEY3—1	KEY analog input

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CDP-H3750

SONY

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Tourist Model

CORRECTION-1

Correct your service manual as shown below.

☛ : **indicates corrected portion.**

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
21	M102	A-4460-232-A	MOTOR (CDM) ASSY	☛ A-4660-232-A	MOTOR (CDM) ASSY
	M103	A-4460-232-A	MOTOR (CDM) ASSY	☛ A-4660-232-A	MOTOR (CDM) ASSY

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ST-H2750/H3750

SERVICE MANUAL

US Model
Canadian Model

Photo is ST-H3750

This set is the tuner section in MHC-2750/3750

SPECIFICATIONS

System	FM stereo, AM superheterodyne tuner
FM tuner section	
Tuning range	87.5 — 108 MHz
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz
AM tuner section	
Tuning range	530 — 1,710 kHz (with the AM tuning interval set at 10 kHz) 531 — 1,602 kHz (with the AM tuning interval at 9 kHz)
Antenna	AM loop antenna, External antenna terminals
Intermediate frequency	450 kHz

Design and specifications subject to change without notice.

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FM STEREO/FM-AM TUNER

SONY®

SECTION 1
SERVICING NOTES

1-1. SUPPLY OF POWER DURING SERVICES

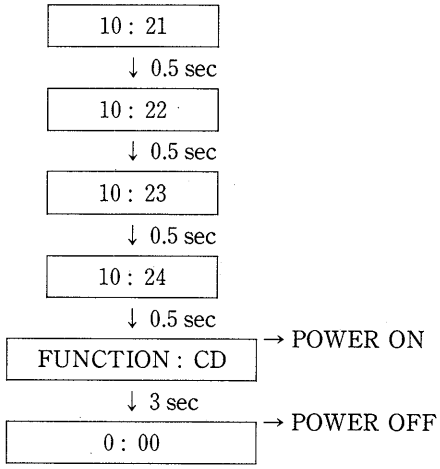
Because the equipment is not provided with any power supply, it is operated with power supplied from the amplifier DXA-H2750/H3750 used in the series. The equipment requires the following 4 types of voltages. Therefore, connect the equipment to DXA-H2750/H3750 for services such as repairing with power supplied, because it will be too complicated to supply these voltages individually.

VOLTAGE	MAJOR CIRCUIT IN USE
AC 3.9V	FL tube filament voltage (VF)
DC −24V	Display controller IC701 grid voltage (VG)
DC 5.6V	Display controller IC701, Tuner PLL IC81 Vcc
DC 12V	Tuner RF, FM/AM DET IC21 Vcc

1-2. SERVICE MODE TO CHECK TIMER ON-OFF

It is possible to check whether the timer normally functions while being connected with an amplifier.

(1) Connect the equipment to the amplifier DXA-H2750/H3750 and set the SYSTEM POWER switch to STAND-BY state.
(2) Set the time of the tuner to any time.
(3) Press 3 switches "BAND", "−" and "MEMORY/NEXT" at the same time (while pressing "BAND" and "−" beforehand, finally press "MEMORY/NEXT")
(4) FL display tube



(5) Completion

Note : After completion of the checking above, data preset in the memory IC702 is erased while resetting the memory to the next page state upon shipping from the works, so be sure to recover the same frequency as that before the repairing.

• Frequencies initially preset

	FM	AM	
		10k STEP	9k STEP
1	87.5MHz	530kHz	531kHz
2	88.0MHz	620kHz	621kHz
3	98.0MHz	1050kHz	1053kHz
4	100.0MHz	1490kHz	1485kHz
5	108.0MHz	1710kHz	1710kHz
6—20	*1	*2	*2

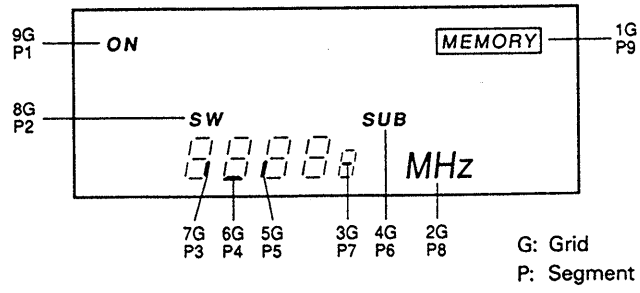
*1 The same frequency values are set for the preset memory No. 6—No. 10, No. 11—No. 15 and No. 16—No. 20 as for No. 1—No. 5 respectively.
*2 The same frequency values are set for the preset memory No. 6—No. 10 as for No. 1—No. 5.

1-3. SERVICE MODE TO CHECK FL TUBE AND KEY INPUT

It is possible to check FL tube all ON grid, segment and key input.

(1) Connect the equipment to the amplifier DXA-H2750/H3750 and remove the AC cord of the amplifier out of the AC receptacle.
(2) While pressing 3 switches "BAND", "−" and "MEMORY/NEXT" at the same time, insert the AC cord of the amplifier into the receptacle.
(3) Thus, all FL display tubes light up. By pressing "+" or "TIMER CONTROL" in this state, partial lighting or key input checking, respectively, is effected.

Partial lighting: Indicates the mode to check complete connection between the grid and segment of the FL tube. The condition is normal when the following indication is effected. By pressing "+" or "−" in the partial lighting mode, the status returns to key input checking or all ON in (3), respectively.



Key input checking: Shows the mode to check key input into 9 keys on the front panel. "0" is indicated at first, and every time a different key is pressed, indicated number is increased. After completion of pressing all 9 keys, "PASS" is indicated.
(Once a key is pressed, pressing it again is rejected.)

(4) After the completion of the checking, the equipment recovers normal operation by once removing the AC cord and inserting it again into the AC receptacle.

1-4. HOW TO FORCEFULLY TURN POWER ON

The equipment is not provided with any power switch. Therefore, power ON/OFF is controlled in the amplifier side. However, even without an amplifier, power is supplyable to the equipment according to the following methods provided any type of power is available, e.g. using a special jig or supplying the 4 types of voltages individually.
(When power is supplied from the amplifier, power is turned ON only for the tuner.)

(1) Supply power.
(2) Press 3 switches "STEREO/MONO", "−" and "MEMORY/NEXT" at the same time.
(Press "STEREO/MONO" and "−" beforehand, and finally press "MEMORY/NEXT".)

However, when the equipment is started up by the methods above, service modes TIMER ON/OFF and FL tube and key input checking are not operable.

SECTION 2
GENERAL

This section is extracted from instruction manual.

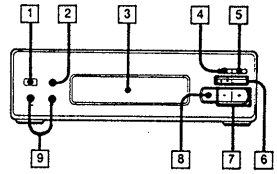
Parts Identification

A

Refer to the pages indicated in ● for use of the buttons.

Tuner Section A

1 Remote control sensor
2 REC/TIMER button ⑳
3 Display window
4 MEMORY/NEXT button ⑩ ㉗ ㊽ ㊿
5 STEREO/MONO (stereo/monaural) button ㉖
6 MODE button and TUNING/PRESET indicators ㉓ ㉕ ㉘
7 TUNING PRESET/TIMER –/+ buttons
8 BAND selector ㉕
9 WAKE UP TIMER 1, 2 /CLOCK SET buttons ⑩ ㊽



Clock Setting

Setting the Clock

Example: Set to AM 9:25 in the morning.

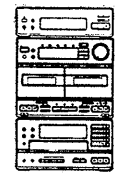
1 **Press WAKE UP TIMER 1 and 2 at the same time.**

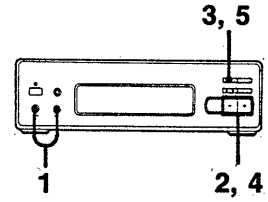
2 **Set the hour with the – or + button.**

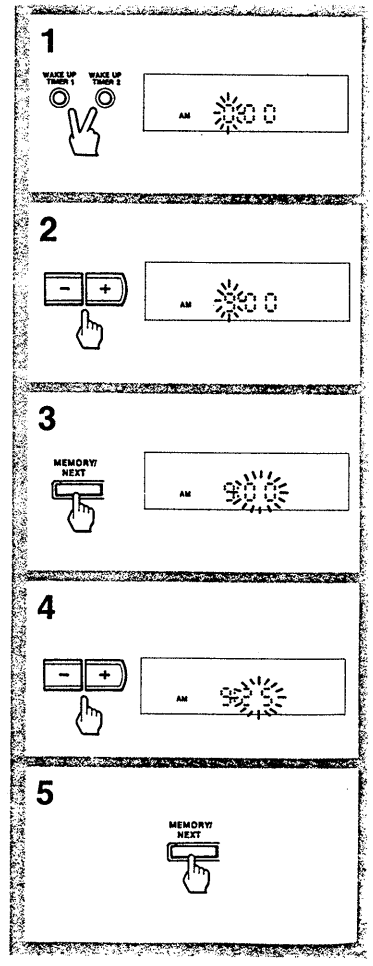
3 **Press MEMORY/NEXT.**

4 **Set the minute with the – or + button.**

5 **Press MEMORY/NEXT.**
The clock starts operating.







When a power interruption occurs
The clock and timer settings are all erased, and "AM 12:00" will flash on the display.

To change the frequency display to the time display
Press CLOCK DISPLAY on the remote commander. Press it again to change to the frequency display.

10

Radio Reception

The automatic tuning allows you to receive stations whose signal is strong enough. When the signal is too weak, use the manual tuning.

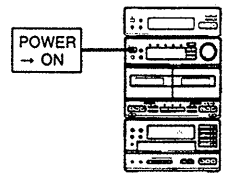
Tuning in Automatically

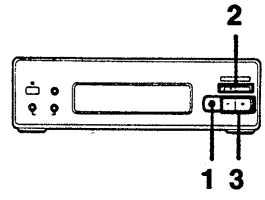
1 Press BAND repeatedly until the desired band appears.
As you press BAND, the band changes as follows:
FM ⟷ AM

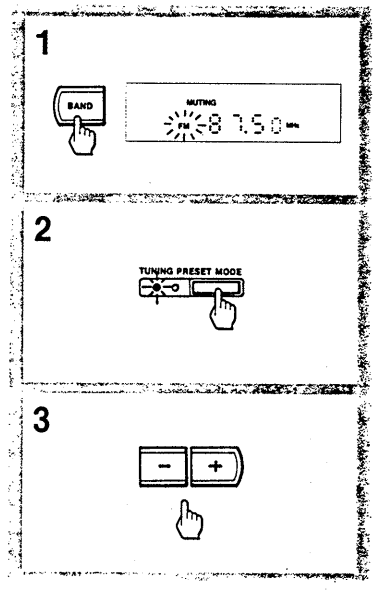
2 Press MODE so that the TUNING indicator lights up.

3 Keep – or + depressed for more than 1 second.
"AUTO" appears on the display and the unit tunes in a station automatically.

Repeat step 3 until the desired station appears.







Radio Reception

Tuning in Manually

1 Press BAND repeatedly until the desired band appears.

2 Press MODE so that the TUNING indicator lights up.

3 Press – or + repeatedly until the desired station appears.

Indicators on the display

TUNED: Appears when a station with sufficient signal strength is tuned in.
STEREO: Appears when an FM stereo program with sufficient signal strength is received.

Antenna adjustment A

For AM reception, find the best location for the supplied AM loop antenna.

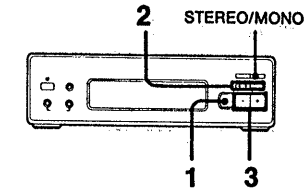
When an FM program is noisy or hard to receive

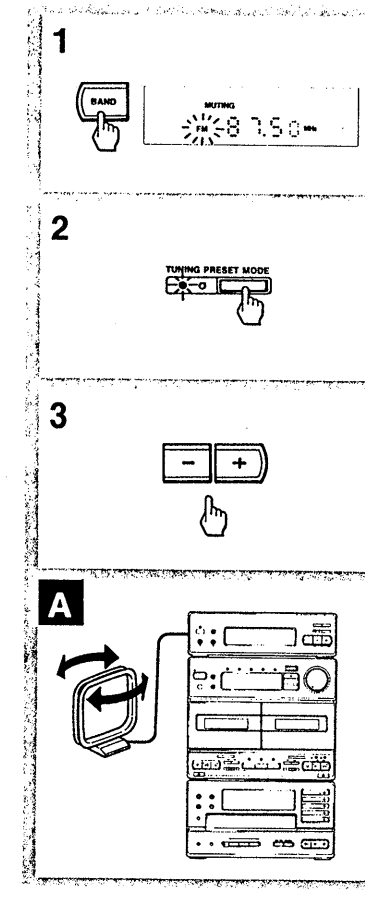
Press STEREO/MONO so that "MONO" appears in the display. There will be no stereo effect, but the reception will be improved. Press the button again to restore the stereo effect.

Changing the AM tuning interval
The AM tuning interval is preset at the factory to 10 kHz.
If you use the system where the frequency allocation system is different from the preset interval, change the interval as follows:
1 Turn on the power.
2 Tune in an AM station.
3 Disconnect the AC power cord.
4 Connect the AC power cord again while pressing TUNING +.
To reset the interval, follow the same procedure.

Important

When the interval is changed, stored stations will be erased from the memory.



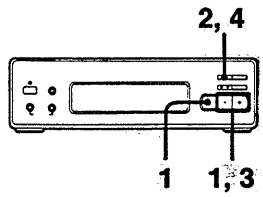


25 26

Radio Reception

Storing Stations

You can store up to 20 FM stations and 10 AM stations in a desired sequence, so that you can tune in the stored station directly by entering the preset station number. This operation is not possible with the remote commander.



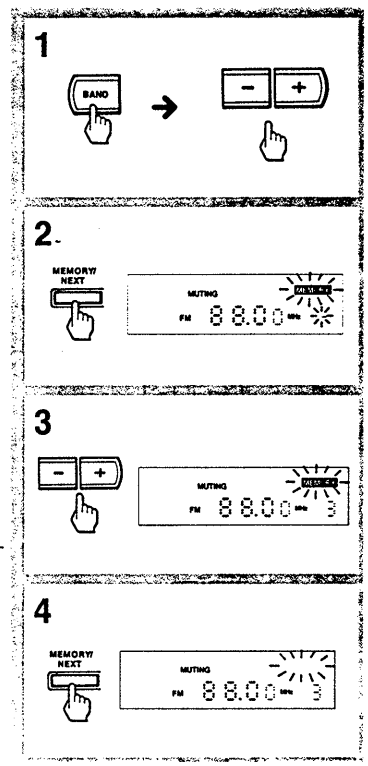
1 **Tune in the desired station.**

2 **Press MEMORY/NEXT.**
"MEMORY" and the preset station numbers appear on the display.

3 **While "MEMORY" is on (for several seconds), press – or + to select a desired preset number.**

4 **Press MEMORY/NEXT.**
"MEMORY" disappears, and the station is stored.

Repeat steps 1 to 4 for each station to be stored.



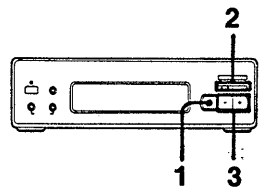
If you cannot store a station successfully
Press MEMORY/NEXT again so that "MEMORY" appears, and then proceed with steps 3 and 4 above.
Be sure to operate while "MEMORY" is on (about 4 seconds).

When you have selected the wrong preset station number
Press MEMORY/NEXT again and then proceed with the steps 3 and 4.

To change the preset station
Store a desired station at the desired preset number by proceeding with the above steps.
The station previously preset will be erased.
Erasing only is not possible.

Radio Reception

To Tune in a Preset Station



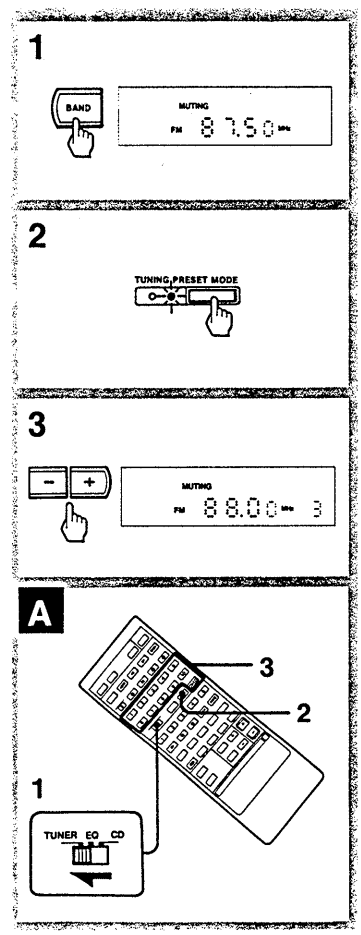
1 **Press BAND to select a desired band.**

2 **Press MODE so that the PRESET indicator lights up.**

3 **Press – or + to select the desired preset station number.**

To tune in a preset station directly A

(Possible only with the remote commander)
1 Set the TUNER/EQ/CD numeric button function selector to TUNER.
2 Press BAND to select a desired band.
3 Press the numeric buttons to select the desired preset station number.



SECTION 3
ELECTRICAL ADJUSTMENTS

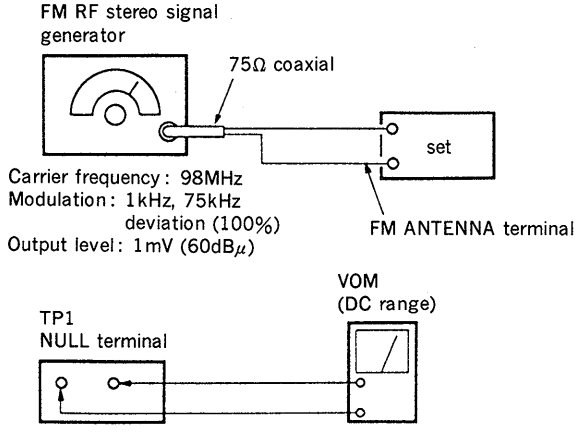
Precautions in Repairing

If the front end unit fails, it is difficult to repair the inner circuits, so replace the entire front end unit.

FM SECTION

FM Discriminator Adjustment (NULL Adjustment)

Setting :



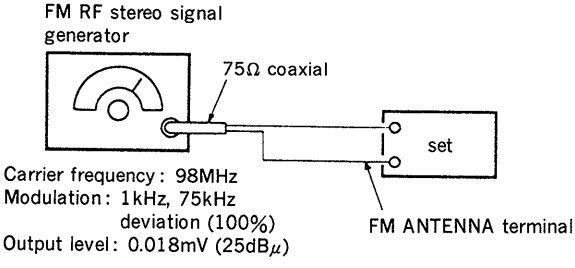
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator alignment.

FM Tuning Level Adjustment

Setting :

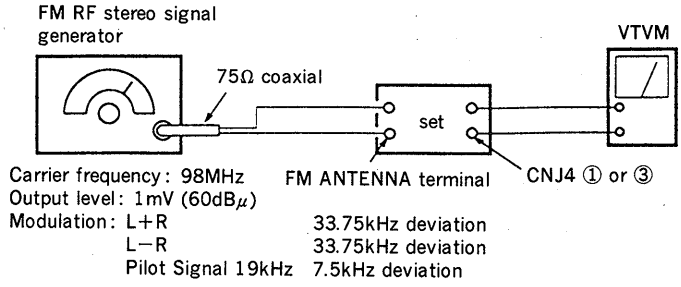


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the TUNED indicator goes on.

FM Stereo Separation Adjustment

Setting :



Procedure :

Tune the set to 98MHz.

FM stereo Signal generator Output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

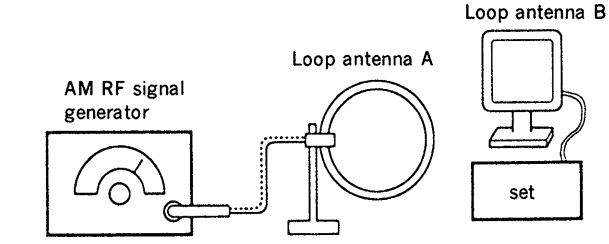
L-CH Stereo separation : Ⓐ—Ⓑ
R-CH Stereo separation : Ⓒ—Ⓓ

The separations of both channels should be equal.

AM SECTION

AM Tuning Level Adjustment

Setting :

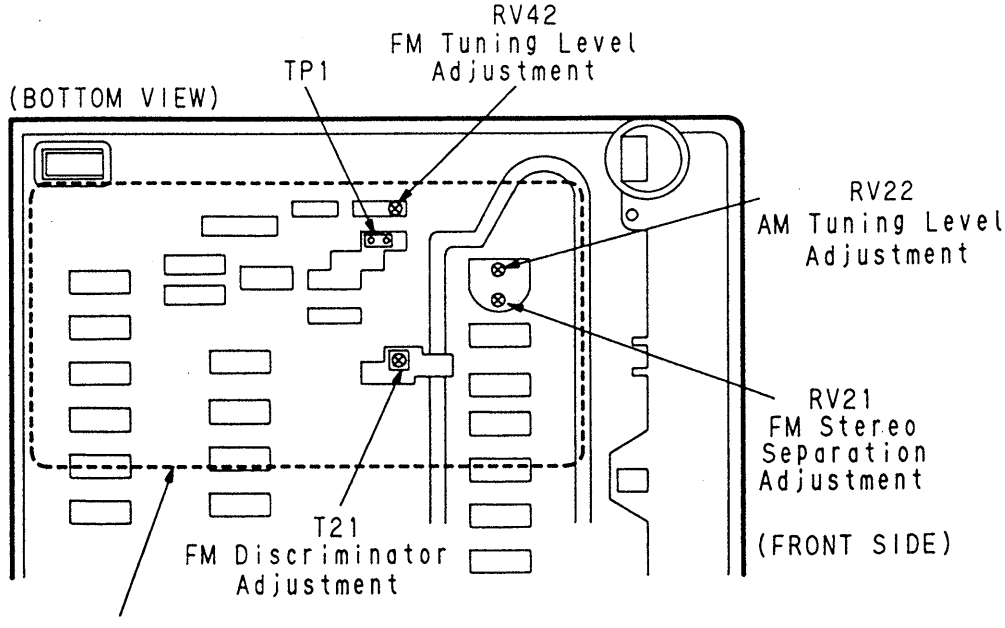


Carrier frequency : 1050kHz
30% amplitude
modulation by 400Hz signal

Procedure :

1. Set loop antenna A so that the loop antenna B input level becomes 58dBμ/m (0.8mV/m)
2. Tune the set to 1050kHz.
3. Adjust the RV22 so that the TUNED indicator goes on.

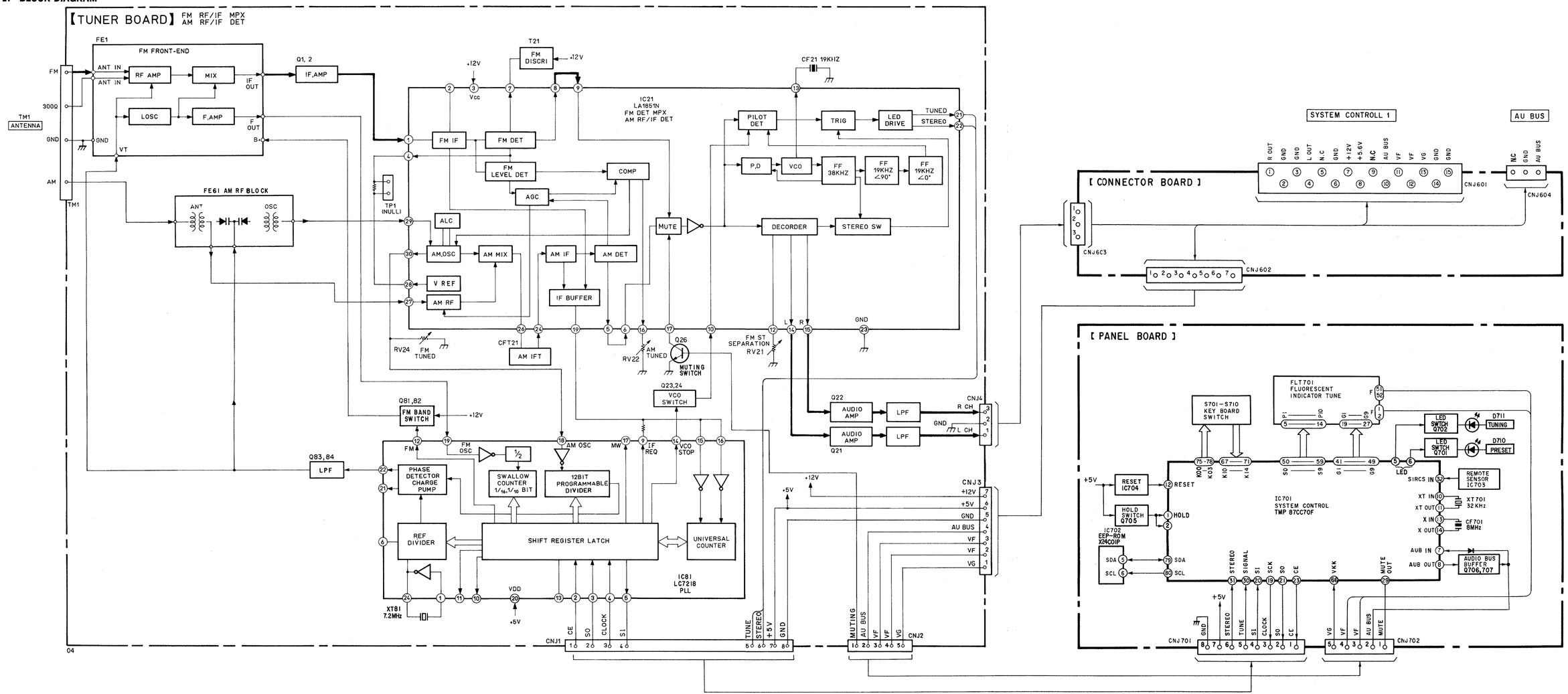
Adjustment Location :



TUNER BOARD

SECTION 4
DIAGRAMS

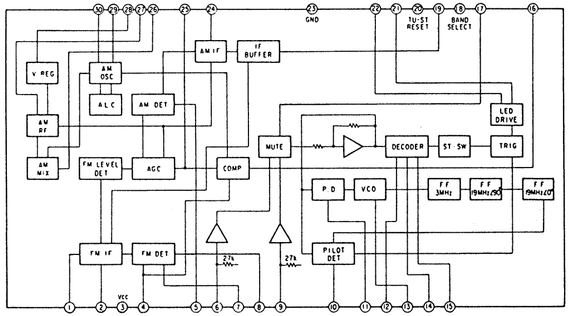
4-1. BLOCK DIAGRAM



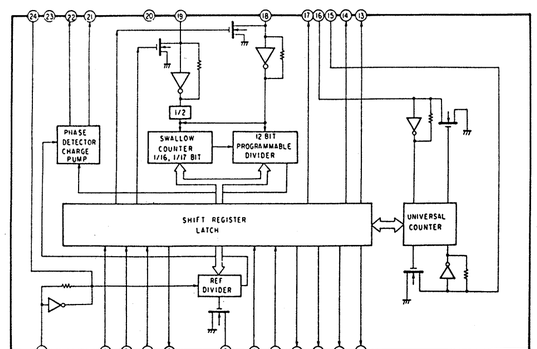
ST-H2750/H3750 ST-H2750/H3750

• IC Block Diagrams

IC21 LA1851N



IC81 LC7218



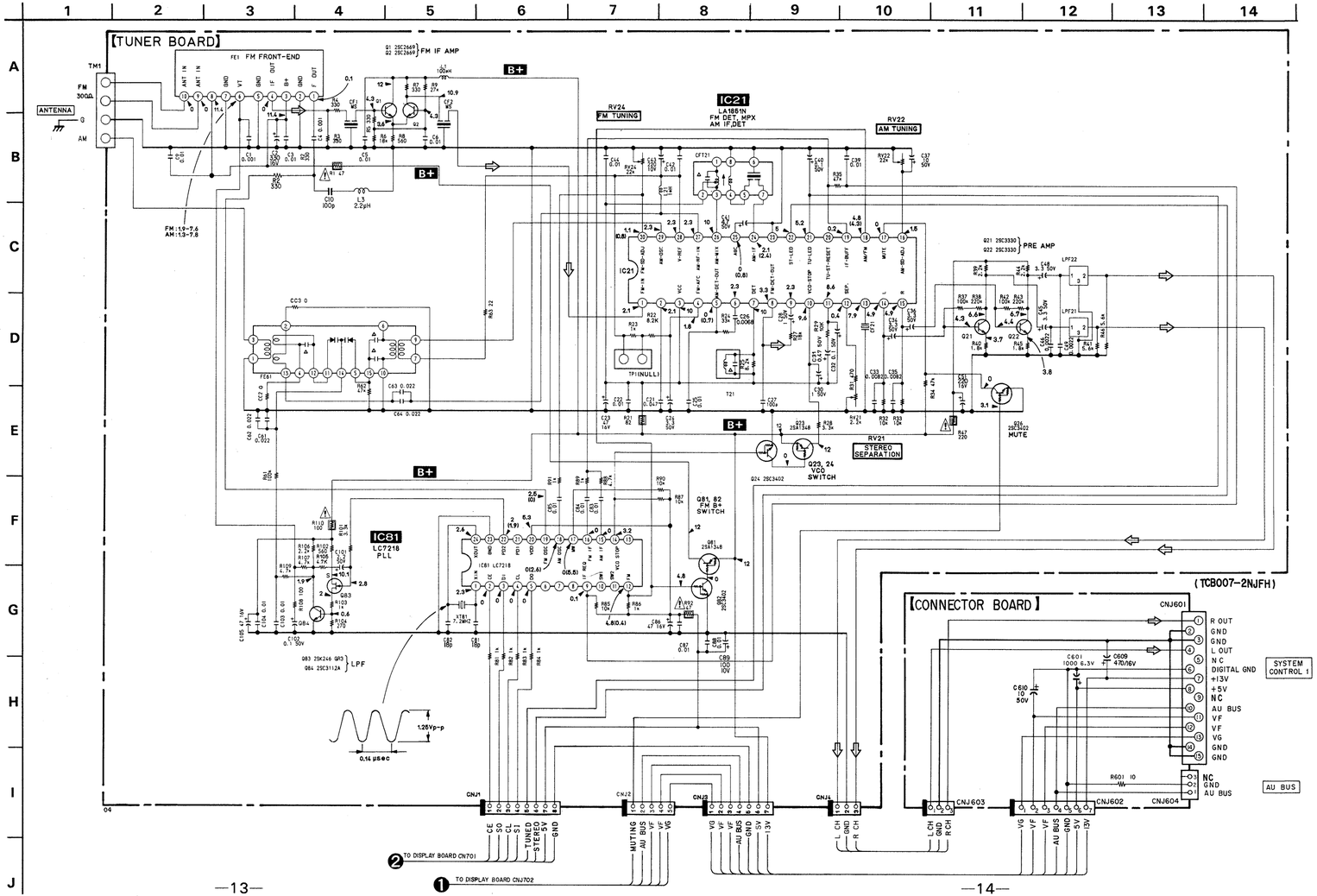
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⌨ : nonflammable resistor.

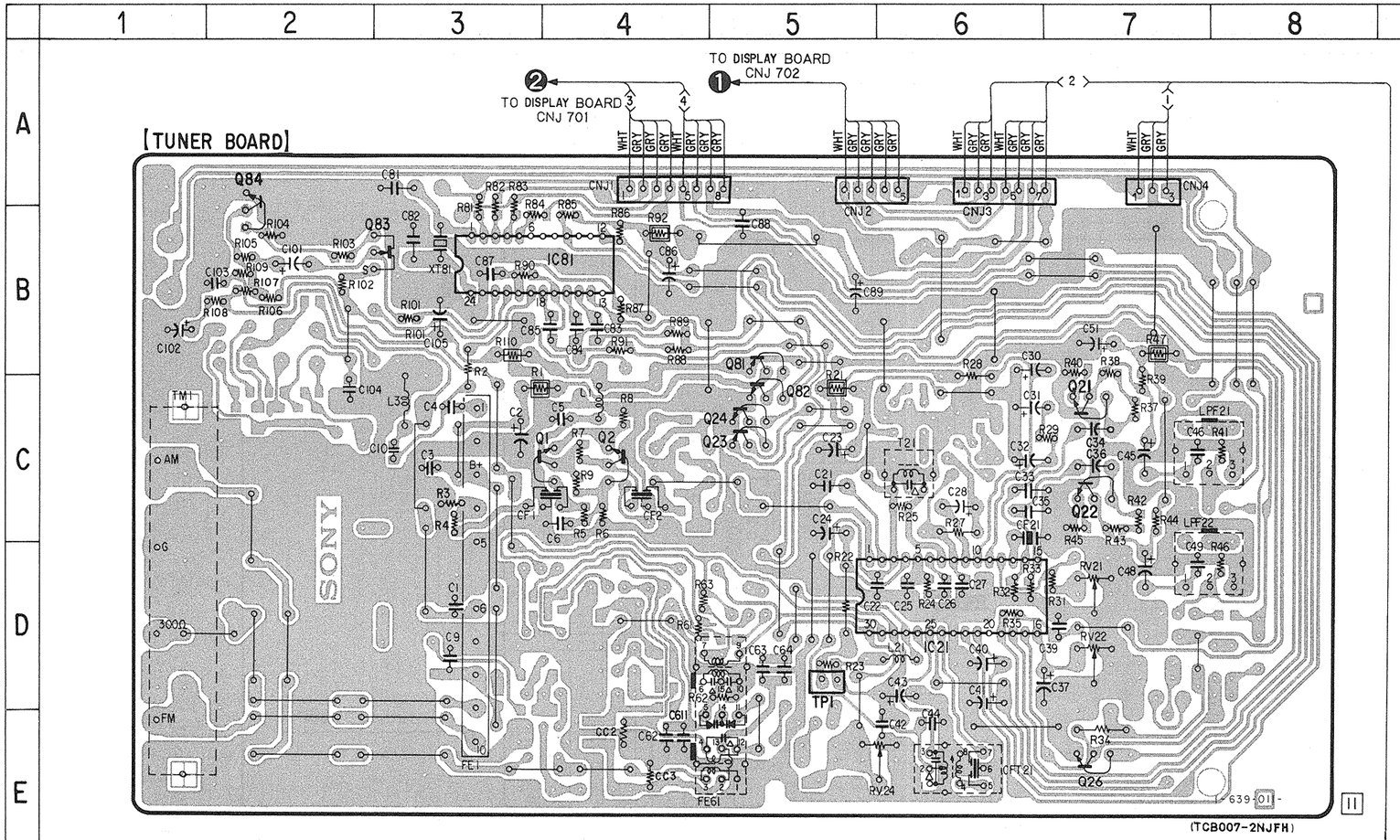
Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ): AM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

4-2. SCHEMATIC DIAGRAM —TUNER SECTION—



4-3. PRINTED WIRING BOARDS —TUNER SECTION— • Refer to page 22 for Semiconductor Lead Layouts.



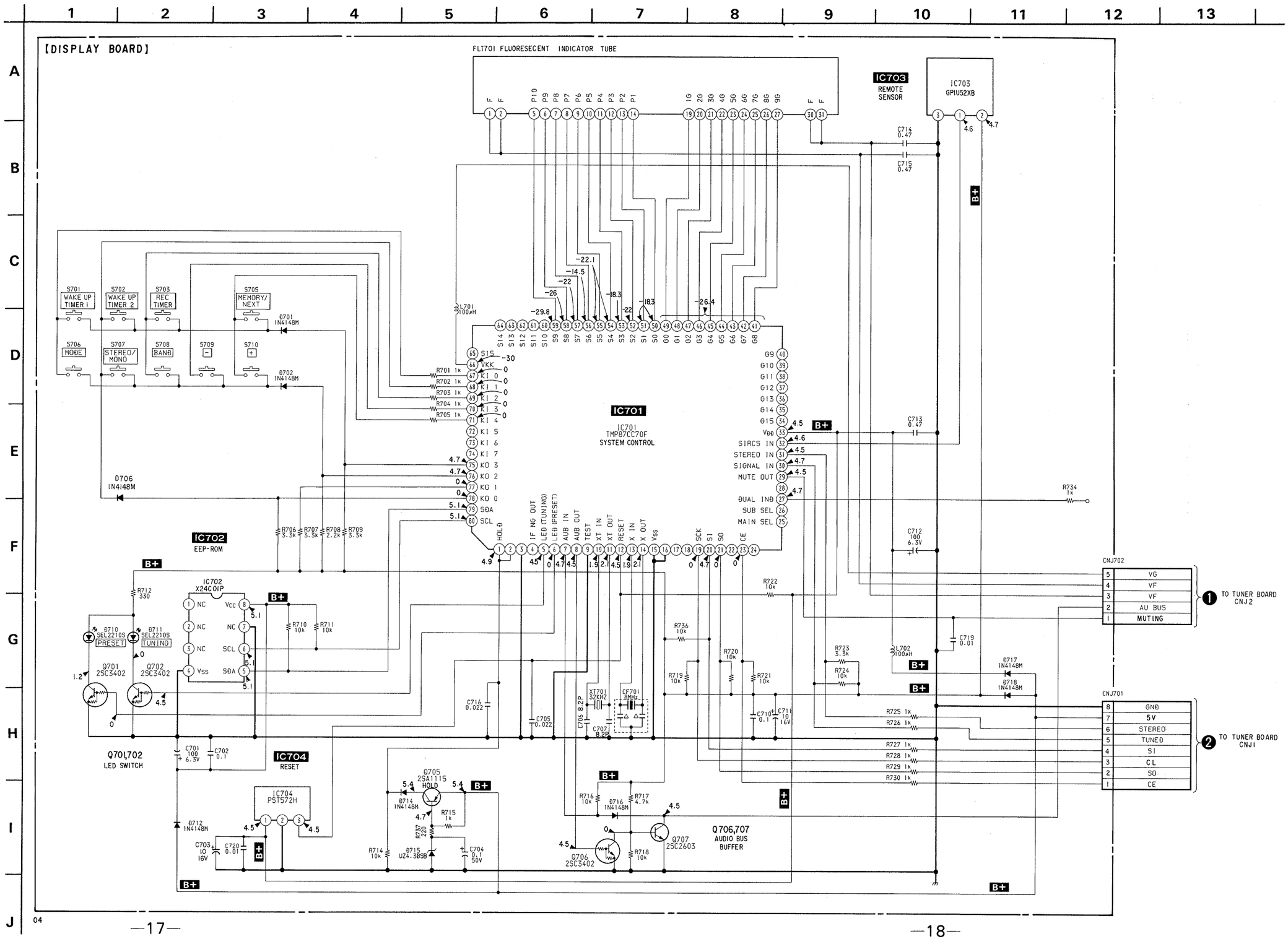
• Semiconductor Location

Ref. No.	Location
IC21	D-6
IC81	B-4
Q1	C-4
Q2	C-4
Q21	C-7
Q22	C-7
Q23	C-5
Q24	C-5
Q26	E-7
Q81	B-5
Q82	C-5
Q83	B-3
Q84	A-2

Note:

• ○—— : parts extracted from the component side.

4-4. SCHEMATIC DIAGRAM —DISPLAY SECTION—

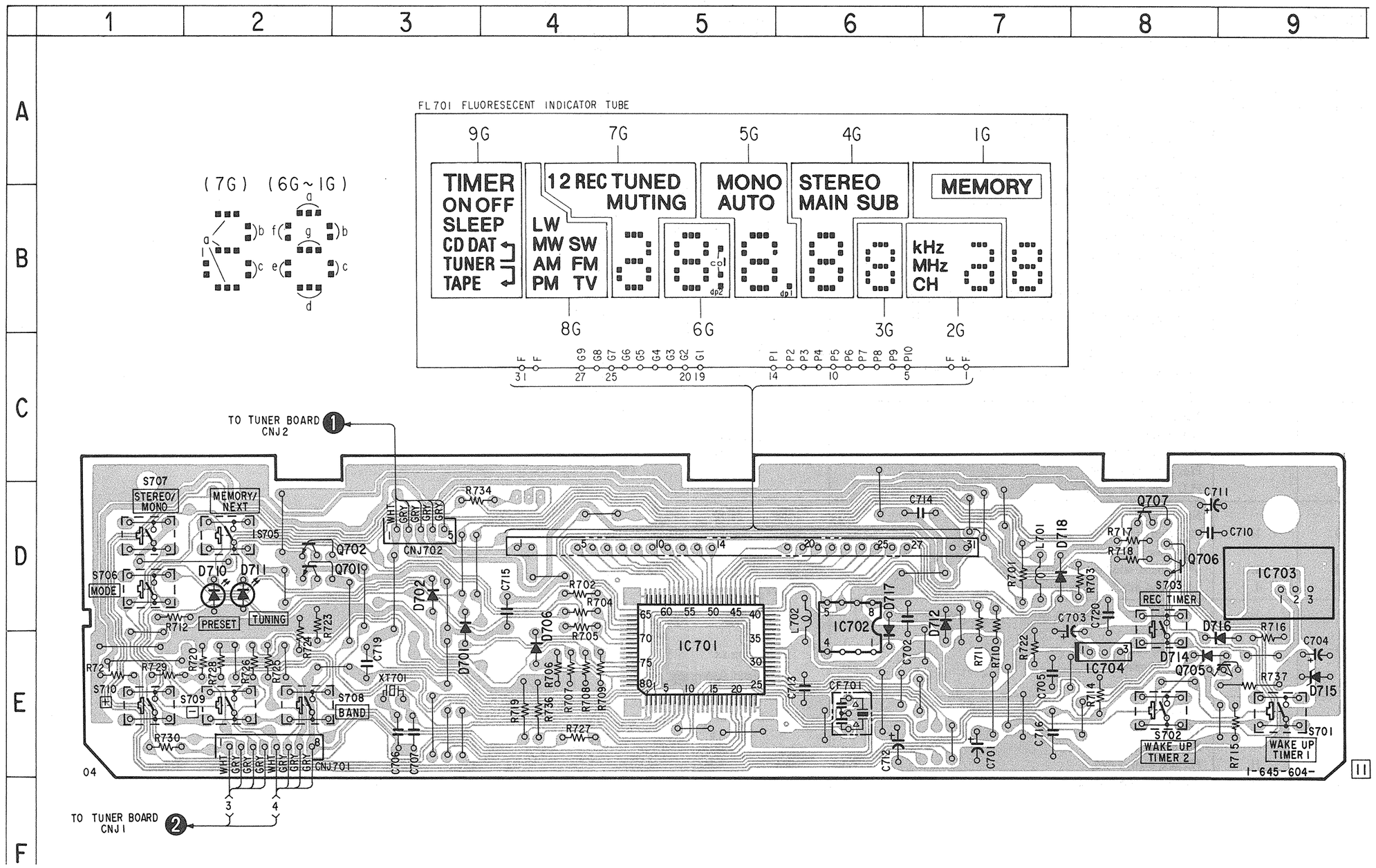


4-5. PRINTED WIRING BOARD —DISPLAY SECTION—

• Refer to page 22 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D701	D-3
D702	D-3
D706	E-4
D710	D-2
D711	D-2
D712	D-7
D714	E-8
D715	E-9
D716	E-8
D717	D-6
D718	D-7
IC701	E-5
IC702	D-6
IC703	D-9
IC704	E-8
Q701	D-2
Q702	D-2
Q705	E-8
Q706	D-8
Q707	D-8



Note on Printed Wiring Board:

• ○—— : parts extracted from the component side.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

4-6. PIN DESCRIPTION

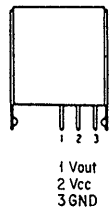
• IC701 System Controller (TMP87CC70F)

The terminals work to control tuner section (IC21, 81), FL tube display and reading and writing of IC702 (preset data), etc. according to key input and signal from the remote controller.

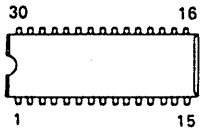
PIN No.	PIN NAME	I/O	ACTIVE	PIN FUNCTION
1	HOLD	I	↓	HOLD detecting interrupt terminal
2	HOLD RESET	I	↑	HOLD resetting interrupt terminal
3		I		Not in use
4	IF NGOUT	O	H	IF count NG output
5	LED1	O	H	TUNING LED ON
6	LED2	O	H	PRESET LED ON
7	AUB IN	I	L	AUDIO BUS input
8	AUB OUT	O	L	AUDIO BUS output
9	TEST	I	H	Test terminal
10	XT IN	I		Low frequency oscillator connection terminal (32KHz)
11	XT OUT	O		Low frequency oscillator connection terminal (32KHz)
12	RESET	I	L	Reset signal input
13	X IN	I		High frequency oscillator connection terminal (8MHz)
14	X OUT	O		High frequency oscillator connection terminal (8MHz)
15	VSS			GND
16		I		Not in use
17, 18		O		Not in use
19	SCK	O		PLL serial clock output
20	SI	I		PLL serial data input
21	SO	O		PLL serial data output
22				Not in use
23	CE	O	H	PLL chip enable
24				Not in use
25	MAIN SEL	O	L	Main sound selection terminal (Not in use)
26	SUB SEL	O	L	Sub sound selection terminal (Not in use)
27	DUAL IND	I	L	Sound dual signal detection terminal (Not in use)
28				Not in use
29	MUTE OUT	O	L	MUTING output
30	SIGNAL IN	I	L	TUNED input
31	STEREO IN	I	L	STEREO input
32	SIRCS IN	I	L	SIRCS input
33	VDD			+5V
34 - 40		O		Not in use
41 - 49	G0 - G8	O	H	FL tube digit output
50 - 59	S0 - S9	O	H	FL tube segment output
60 - 65		O	H	Not in use
66	VKK			FL tube driving power supply
67 - 71	KI0 - KI4	I	H	Key input
72		I		Not in use
73, 74				Not in use
75 - 78	KO0 - KO3	O	H	Key output
79	SDA	I/O		Data input/output for EEPROM
80	SCL	O		Clock output for EEPROM

4-7. SEMICONDUCTOR LEAD LAYOUTS

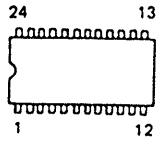
GP1U52XB



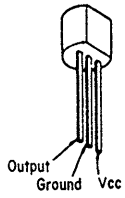
LA1851N



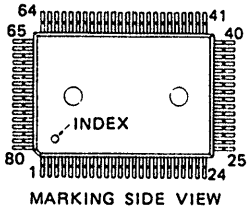
LC7218



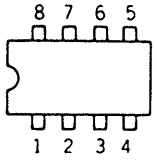
PST572H



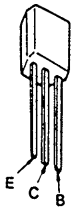
TMP87CC70F



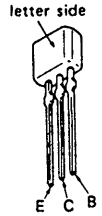
X24C01P



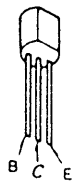
DTA114ES
DTC114ES
2S2603-EF
2SC2669-0Y
2SC3113-AB



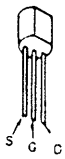
2SA1175-HFE
2SC2785-HFE



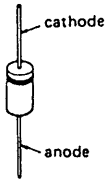
2SC3330-T



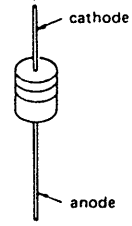
2SK246-GR3



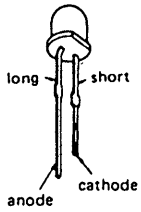
UZ-4.3BSB
1N4148M



1SS120



SEL2210S-D



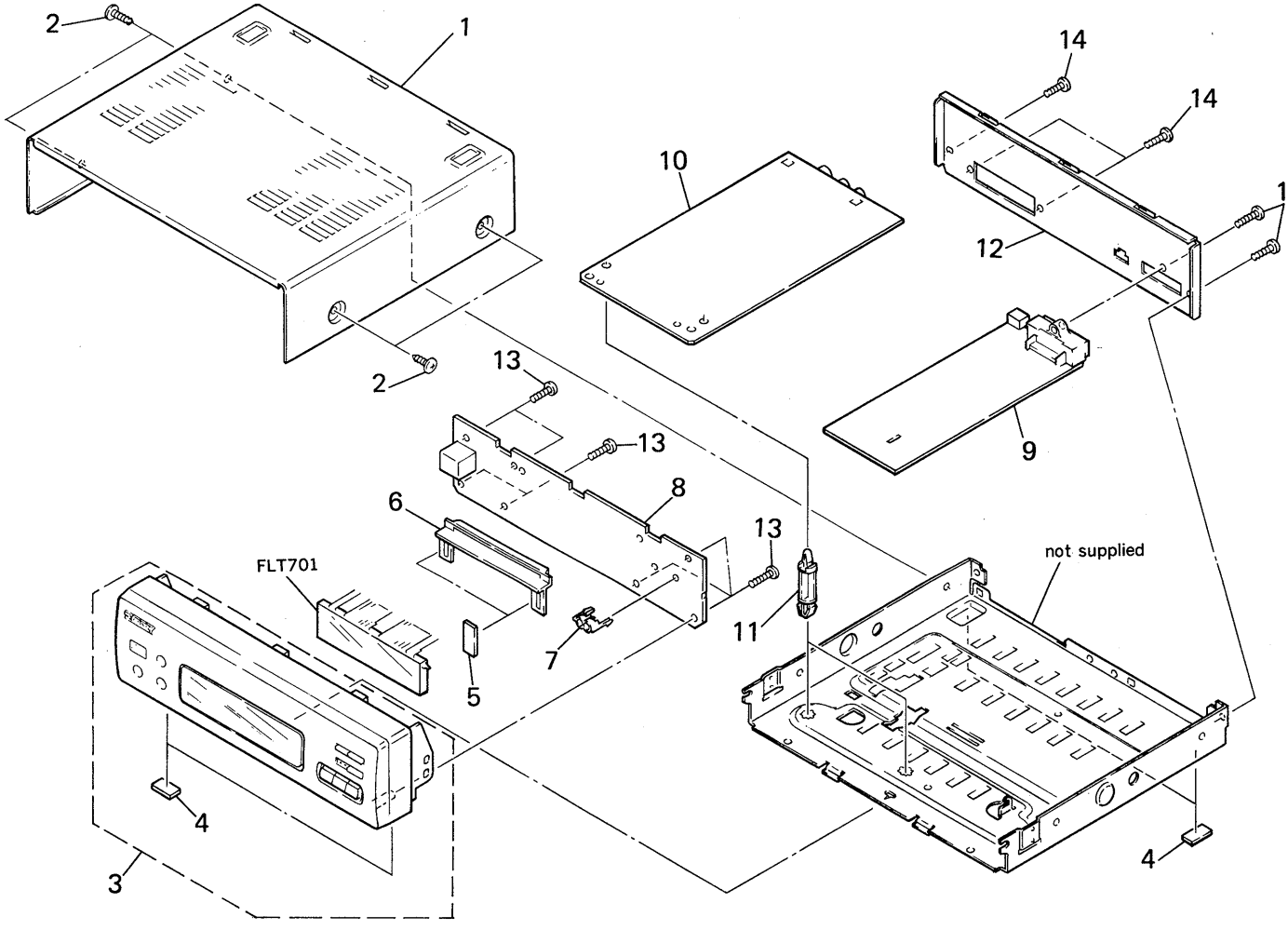
SECTION 5
EXPLODED VIEW

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.



Ref. No.	Part No.	Description	Remark
* 1	4-944-423-61	CASE (K206522)	
2	3-363-099-01	SCREW (CASE 3 TP2)	
3	X-4942-950-1	PANEL ASSY, FRONT (H2750)	
3	X-4942-951-1	PANEL ASSY, FRONT (H3750)	
4	4-930-336-21	FOOT (FELT)	
* 5	4-932-810-11	CUSHION (FL)	
* 6	4-944-441-01	HOLDER (FL TUBE)	
* 7	4-954-788-01	HOLDER (LED)	
* 8	A-4356-143-A	DISPLAY BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
* 9	1-645-605-12	CONNECTOR BOARD	
* 10	A-4303-369-A	TUNER BOARD, COMPLETE (TCB007-2NJFH)	
* 11	4-914-008-01	HOLDER, PCB	
* 12	4-953-719-01	PANEL, BACK (H2750)	
* 12	4-953-719-41	PANEL, BACK (H3750)	
13	4-951-620-01	SCREW (2.6X8), +BVTP	
14	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
FLT701	1-519-709-11	INDICATOR TUBE, FLUORESCENT	

TUNER

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
*	A-4303-369-A	TUNER BOARD, COMPLETE(TCB007-2NJFH)			
		**********			
		< CAPACITOR >			
C1	1-162-294-11	CERAMIC CHIP	0.001uF	20%	25V
C2	1-124-119-00	ELECT	330uF	20%	16V
C3	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C4	1-162-294-31	CERAMIC CHIP	0.001uF	20%	25V
C5	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C6	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C9	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C10	1-162-516-11	CERAMIC CHIP	100PF	10%	50V
C21	1-101-006-00	CERAMIC	0.047uF		50V
C22	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C23	1-124-477-11	ELECT	47uF	20%	16V
C24	1-123-382-00	ELECT	3.3uF	20%	50V
C25	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C26	1-163-019-00	CERAMIC CHIP	0.0068uF	20%	12V
C27	1-162-516-11	CERAMIC CHIP	100PF	10%	50V
C28	1-124-903-11	ELECT	1.0uF	20%	50V
C30	1-124-903-11	ELECT	1.0uF	20%	50V
C31	1-124-902-00	ELECT	0.47uF	20%	50V
C32	1-124-463-00	ELECT	0.1uF	20%	50V
C33	1-130-482-00	FILM	0.0082uF	5%	50V
C34	1-123-382-00	ELECT	3.3uF	20%	50V
C35	1-130-482-00	FILM	0.0082uF	5%	50V
C36	1-123-382-00	ELECT	3.3uF	20%	50V
C37	1-124-907-11	ELECT	10uF	20%	50V
C39	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C40	1-124-463-00	ELECT	0.1uF	20%	50V
C41	1-124-927-11	ELECT	4.7uF	20%	50V
C42	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C43	1-126-176-11	ELECT	220uF	20%	10V
C44	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C45	1-123-382-00	ELECT	3.3uF	20%	50V
C46	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V
C48	1-123-382-00	ELECT	3.3uF	20%	50V
C49	1-161-375-00	CERAMIC CHIP	0.0022uF	20%	25V
C51	1-126-934-11	ELECT	220uF	20%	16V
C61	1-163-063-00	CERAMIC MELF	0.022uF		25V
C62	1-163-063-00	CERAMIC MELF	0.022uF		25V
C63	1-163-063-00	CERAMIC MELF	0.022uF		25V
C64	1-163-063-00	CERAMIC MELF	0.022uF		25V
C81	1-102-953-00	CERAMIC	18PF	5%	50V
C82	1-102-953-00	CERAMIC	18PF	5%	50V
C83	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C84	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C85	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C86	1-124-477-11	ELECT	47uF	20%	16V
C87	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C88	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C89	1-124-443-00	ELECT	100MF	20%	10V
C101	1-124-925-11	ELECT	2.2uF	20%	50V
C102	1-124-463-00	ELECT	0.1uF	20%	50V
C103	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C104	1-163-059-00	CERAMIC MELF	0.01uF	20%	16V
C105	1-124-477-11	ELECT	47uF	20%	16V
		< FILTER >			
CF1	1-567-389-11	FILTER, CERAMIC			
CF2	1-567-389-11	FILTER, CERAMIC			
		< OSCILLATOR >			
CF21	1-577-075-11	OSCILLATOR, CERAMIC (19kHz)			
		< IF TRANSFORMER >			
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)			
		< CONNECTOR >			
* CNJ1	1-564-342-11	PIN, CONNECTOR 8P			
* CNJ2	1-564-339-00	PIN, CONNECTOR 5P			
* CNJ3	1-564-341-11	PIN, CONNECTOR 7P			
* CNJ4	1-564-337-00	PIN, CONNECTOR 3P			
		< FM FRONT END >			
FE1	1-463-862-21	FRONT END, FM			

Ref. No.	Part No.	Description			Remark
		< ENCAPSULATED COMPONENT >			
FE61	1-236-461-11	ENCAPSULATED COMPONENT			
		< IC >			
IC21	8-759-821-45	IC LA1851N			
IC81	8-759-820-91	IC LC7218			
		< INDUCTOR >			
L1	1-410-645-31	MICRO INDUCTOR 100uH			
L3	1-410-501-11	MICRO INDUCTOR 2.2uH			
L21	1-410-171-11	MICRO INDUCTOR 1mmH			
		< LOW PASS FILTER >			
LPF21	1-235-164-00	IC FILTER, LOW PASS			
LPF22	1-235-164-00	IC FILTER, LOW PASS			
		< TRANSISTOR >			
Q1	8-729-230-99	TRANSISTOR 2SC2669-0Y			
Q2	8-729-230-99	TRANSISTOR 2SC2669-0Y			
Q21	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q22	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q23	8-729-900-61	TRANSISTOR DTA114ES			
Q24	8-729-900-80	TRANSISTOR DTC114ES			
Q26	8-729-900-80	TRANSISTOR DTC114ES			
Q81	8-729-900-61	TRANSISTOR DTA114ES			
Q82	8-729-900-80	TRANSISTOR DTC114ES			
Q83	8-729-202-67	TRANSISTOR 2SK246-GR3			
Q84	8-729-230-93	TRANSISTOR 2SC3113-AB			
		< RESISTOR >			
⚠R1	1-249-401-11	CARBON (SMALL)	47	5%	1/4W F
R2	1-249-329-11	CARBON MELF	330	5%	1/8W
R3	1-249-329-11	CARBON MELF	330	5%	1/8W
R4	1-249-329-11	CARBON MELF	330	5%	1/8W
R5	1-249-329-11	CARBON MELF	330	5%	1/8W
R6	1-249-350-11	CARBON MELF	18K	5%	1/8W
R7	1-249-329-11	CARBON MELF	330	5%	1/8W
R8	1-249-332-11	CARBON MELF	560	5%	1/8W
R9	1-249-352-11	CARBON MELF	27K	5%	1/8W
⚠R21	1-249-404-00	CARBON (SMALL)	82	5%	1/4W F
R22	1-249-428-11	CARBON (SMALL)	8.2K	5%	1/4W
R23	1-249-335-11	CARBON MELF	1K	5%	1/8W
R24	1-249-353-11	CARBON MELF	33K	5%	1/8W
R25	1-249-346-11	CARBON MELF	8.2K	5%	1/8W
R27	1-249-432-11	CARBON (SMALL)	18K	5%	1/4W
R28	1-249-423-11	CARBON (SMALL)	3.3K	5%	1/4W
R29	1-249-347-11	CARBON MELF	10K	5%	1/8W

Ref. No.	Part No.	Description			Remark
R31	1-249-331-11	CARBON MELF	470	5%	1/8W
R32	1-249-347-11	CARBON MELF	10K	5%	1/8W
R33	1-249-347-11	CARBON MELF	10K	5%	1/8W
R34	1-249-437-11	CARBON (SMALL)	47K	5%	1/4W
R35	1-249-335-11	CARBON MELF	47K	5%	1/8W
R37	1-249-359-11	CARBON MELF	100K	5%	1/8W
R38	1-249-363-11	CARBON MELF	220K	5%	1/8W
R39	1-249-339-11	CARBON MELF	2.2K	5%	1/8W
R40	1-249-338-11	CARBON MELF	1.8K	5%	1/8W
R41	1-249-344-11	CARBON MELF	5.6K	5%	1/8W
R42	1-249-359-11	CARBON MELF	100K	5%	1/8W
R43	1-249-363-11	CARBON MELF	220K	5%	1/8W
R44	1-249-339-11	CARBON MELF	2.2K	5%	1/8W
R45	1-249-338-11	CARBON MELF	1.8K	5%	1/8W
R46	1-249-344-11	CARBON MELF	5.6K	5%	1/8W
⚠R47	1-249-409-11	CARBON (SMALL)	220	5%	1/4W F
R48	1-249-359-11	CARBON MELF	100K	5%	1/8W
R49	1-249-359-11	CARBON MELF	100K	5%	1/8W
R61	1-249-359-11	CARBON MELF	100K	5%	1/8W
R62	1-249-355-11	CARBON MELF	47K	5%	1/8W
R63	1-249-315-11	CARBON MELF	22	5%	1/8W
R81	1-249-335-11	CARBON MELF	1K	5%	1/8W
R82	1-249-335-11	CARBON MELF	1K	5%	1/8W
R83	1-249-335-11	CARBON MELF	1K	5%	1/8W
R84	1-249-335-11	CARBON MELF	1K	5%	1/8W
R85	1-249-347-11	CARBON MELF	10K	5%	1/8W
R86	1-249-335-11	CARBON MELF	1K	5%	1/8W
R87	1-249-347-11	CARBON MELF	10K	5%	1/8W
R88	1-249-343-11	CARBON MELF	4.7K	5%	1/8W
R89	1-249-335-11	CARBON MELF	1K	5%	1/8W
R90	1-249-347-11	CARBON MELF	10K	5%	1/8W
R91	1-249-335-11	CARBON MELF	1K	5%	1/8W
⚠R92	1-249-401-11	CARBON (SMALL)	47	5%	1/4W F
R101	1-249-341-11	CARBON MELF	3.3K	5%	1/8W
R102	1-249-332-11	CARBON MELF	560	5%	1/8W
R103	1-249-335-11	CARBON MELF	1K	5%	1/8W
R104	1-249-328-11	CARBON MELF	270	5%	1/8W
R105	1-249-343-11	CARBON MELF	4.7K	5%	1/8W
R106	1-249-339-11	CARBON MELF	2.2K	5%	1/8W
R107	1-249-343-11	CARBON MELF	4.7K	5%	1/8W
R108	1-249-323-11	CARBON MELF	100	5%	1/8W
R109	1-249-343-11	CARBON MELF	4.7K	5%	1/8W
⚠R110	1-249-405-11	CARBON (SMALL)	100	5%	1/4W F
CC2	1-249-366-11	CARBON MELF	0	5%	1/5W
CC3	1-249-366-11	CARBON MELF	0	5%	1/5W
		< VARIABLE RESISTOR >			
RV21	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV22	1-238-601-11	RES, ADJ, CARBON 22K			

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

TUNER | DISPLAY | CONNECTOR

Ref. No.	Part No.	Description			Remark
RV24	1-238-601-11	RES, ADJ, CARBON 22K			
		< TRANSFORMER >			
T21	1-404-807-11	TRANSFORMER, DISCRIMINATOR			
		< TERMINAL >			
* TM1	1-537-138-21	TERMINAL BOARD, PUSH 4P (ANTENNA)			
		< CONNECTOR PIN >			
* TP1	1-560-060-00	PIN, CONNECTOR 2P			
		< CRYSTAL VIBRATOR >			
XT81	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)			
**********					
*	A-4356-143-A	DISPLAY BOARD COMPLETE			
		**********			
*	1-645-605-12	CONNECTOR BOARD			
		**********			
*	4-932-810-11	CUSHION (FL)			
*	4-944-441-01	HOLDER (FL TUBE)			
*	4-954-788-01	HOLDER (LED)			
		< CAPACITOR >			
C601	1-124-471-00	ELECT	1000uF	20%	6.3V
C609	1-126-103-11	ELECT	470uF	20%	16V
C610	1-124-907-11	ELECT	10uF	20%	50V
C701	1-126-177-11	ELECT	100uF	20%	10V
C702	1-164-159-11	CERAMIC	0.1uF		50V
C703	1-126-157-11	ELECT	10uF	20%	16V
C704	1-124-463-00	ELECT	0.1uF	20%	50V
C705	1-161-494-00	CERAMIC	0.022uF		25V
C706	1-162-198-31	CERAMIC	8.2PF	10%	50V
C707	1-162-198-31	CERAMIC	8.2PF	10%	50V
C710	1-164-159-11	CERAMIC	0.1uF		50V
C711	1-126-157-11	ELECT	10uF	20%	16V
C712	1-126-177-11	ELECT	100uF	20%	10V
C713	1-136-173-00	FILM	0.47uF	5%	50V
C714	1-136-173-00	FILM	0.47uF	5%	50V
C715	1-136-173-00	FILM	0.47uF	5%	50V
C716	1-161-494-00	CERAMIC	0.022uF		25V
C719	1-162-306-11	CERAMIC	0.01uF	20%	16V
C720	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< VIBRATOR >			
CF701	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
* CNJ601	1-566-859-11	SOCKET, CONNECTOR 15P (SYSTEM CONTROL 1)			
* CNJ602	1-564-341-11	PIN, CONNECTOR 7P			
* CNJ603	1-564-337-00	PIN, CONNECTOR 3P			
* CNJ604	1-565-561-11	PIN, CONNECTOR 3P (AU BUS)			
* CNJ701	1-564-342-11	PIN, CONNECTOR 8P			
* CNJ702	1-564-339-00	PIN, CONNECTOR 5P			
		< DIODE >			
D701	8-719-987-63	DIODE	1N4148M		
D702	8-719-987-63	DIODE	1N4148M		
D706	8-719-987-63	DIODE	1N4148M		
D710	8-719-301-39	LED	SEL2210S-D (PRESET)		
D711	8-719-301-39	LED	SEL2210S-D (TUNING)		
D712	8-719-987-63	DIODE	1N4148M		
D714	8-719-987-63	DIODE	1N4148M		
D715	8-719-010-29	DIODE	UZ-4.3BSB		
D716	8-719-987-63	DIODE	1N4148M		
D717	8-719-987-63	DIODE	1N4148M		
D718	8-719-987-63	DIODE	1N4148M		
		< FLUORESCENT INDICATOR >			
FLT701	1-519-709-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC701	8-759-059-85	IC	TMP87CC70F-6021		
IC702	8-759-500-31	IC	X24C01P		
IC703	8-749-920-83	IC	GP1U52XB		
IC704	8-759-515-58	IC	PST572H		
		< COIL >			
L701	1-410-521-11	INDUCTOR	100uH		
L702	1-410-521-11	INDUCTOR	100uH		
		< TRANSISTOR >			
Q701	8-729-900-80	TRANSISTOR	DTC114ES		
Q702	8-729-900-80	TRANSISTOR	DTC114ES		
Q705	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q706	8-729-900-80	TRANSISTOR	DTC114ES		
Q707	8-729-620-05	TRANSISTOR	2SC2603-EF		
		< RESISTOR >			
R601	1-249-393-11	CARBON	10	5%	1/4W F
R701	1-249-417-11	CARBON	1K	5%	1/4W F
R702	1-249-417-11	CARBON	1K	5%	1/4W F
R703	1-249-417-11	CARBON	1K	5%	1/4W F
R704	1-249-417-11	CARBON	1K	5%	1/4W F

Ref. No.	Part No.	Description				Remark
R705	1-249-417-11	CARBON	1K	5%	1/4W	F
R706	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R707	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R708	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R709	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R710	1-249-429-11	CARBON	10K	5%	1/4W	
R711	1-249-429-11	CARBON	10K	5%	1/4W	
R712	1-249-411-11	CARBON	330	5%	1/4W	
R714	1-249-429-11	CARBON	10K	5%	1/4W	
R715	1-249-417-11	CARBON	1K	5%	1/4W	F
R716	1-249-429-11	CARBON	10K	5%	1/4W	
R717	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R718	1-249-429-11	CARBON	10K	5%	1/4W	
R719	1-249-429-11	CARBON	10K	5%	1/4W	
R720	1-249-429-11	CARBON	10K	5%	1/4W	
R721	1-249-429-11	CARBON	10K	5%	1/4W	
R722	1-249-429-11	CARBON	10K	5%	1/4W	
R723	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R724	1-249-429-11	CARBON	10K	5%	1/4W	
R725	1-249-417-11	CARBON	1K	5%	1/4W	F
R726	1-249-417-11	CARBON	1K	5%	1/4W	F
R727	1-249-417-11	CARBON	1K	5%	1/4W	F
R728	1-249-417-11	CARBON	1K	5%	1/4W	F
R729	1-249-417-11	CARBON	1K	5%	1/4W	F
R730	1-249-417-11	CARBON	1K	5%	1/4W	F
R734	1-249-417-11	CARBON	1K	5%	1/4W	F
R736	1-249-429-11	CARBON	10K	5%	1/4W	
R737	1-249-409-11	CARBON	220	5%	1/4W	F
		< SWITCH >				
S701	1-554-303-21	SWITCH, TACTILE (WAKE UP TIMER 1)				
S702	1-554-303-21	SWITCH, TACTILE (WAKE UP TIMER 2)				
S703	1-554-303-21	SWITCH, TACTILE (REC TIMER)				
S705	1-554-303-21	SWITCH, TACTILE (MEMORY/NEXT)				
S706	1-554-303-21	SWITCH, TACTILE (MODE)				
S707	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)				
S708	1-554-303-21	SWITCH, TACTILE (BAND)				
S709	1-554-303-21	SWITCH, TACTILE (-)				
S710	1-554-303-21	SWITCH, TACTILE (+)				
		< VIBRATOR >				
XT701	1-527-997-21	VIBRATOR, CRYSTAL (32kHz)				

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Audio Group

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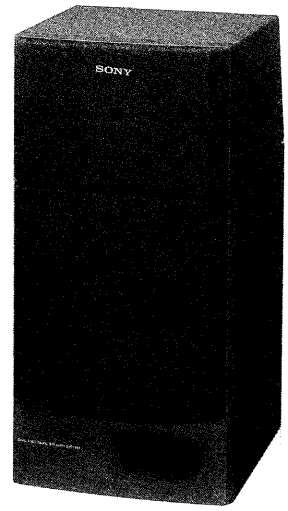
SS-H3700

SERVICE MANUAL

AEP Model
UK Model

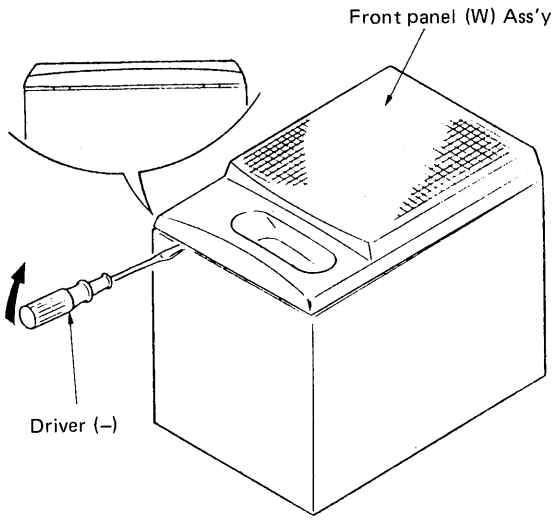


This set is the speaker system in MHC-3700.

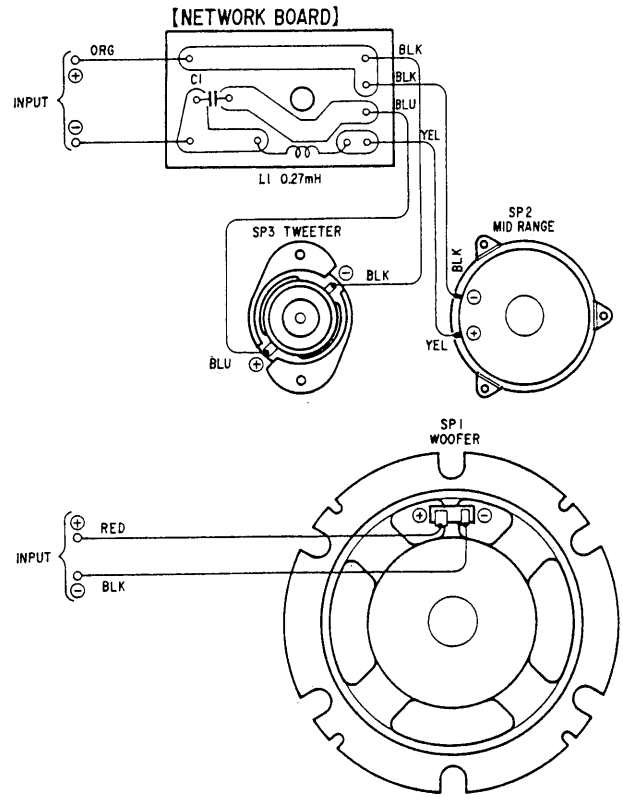
SPECIFICATIONS

Speaker system	3-way dual enclosure type
High pass speaker section	
Spekaer units	Mid-range: 80mm cone type Tweeter: 25mm Balance drive type
Nominal impedance	8Ω
Power handling capacity	Maximum input power 40W
Dimensions	Approx. 185×115×225mm (w/h/d)
Weight	Approx. 1.7g (1)
Low pass speaker section	
Speaker units	Woofer: 140mm cone type
Nominal impedance	6Ω
Power handling capacity	Maxmum input power 60W
Dimensions	Approx. 185×250×225mm (w/h/d)
Weight	Approx. 3.2kg (1)

1. FRONT PANEL (W) ASSY REMOVAL



2. LEAD WIRES ARRANGEMENT



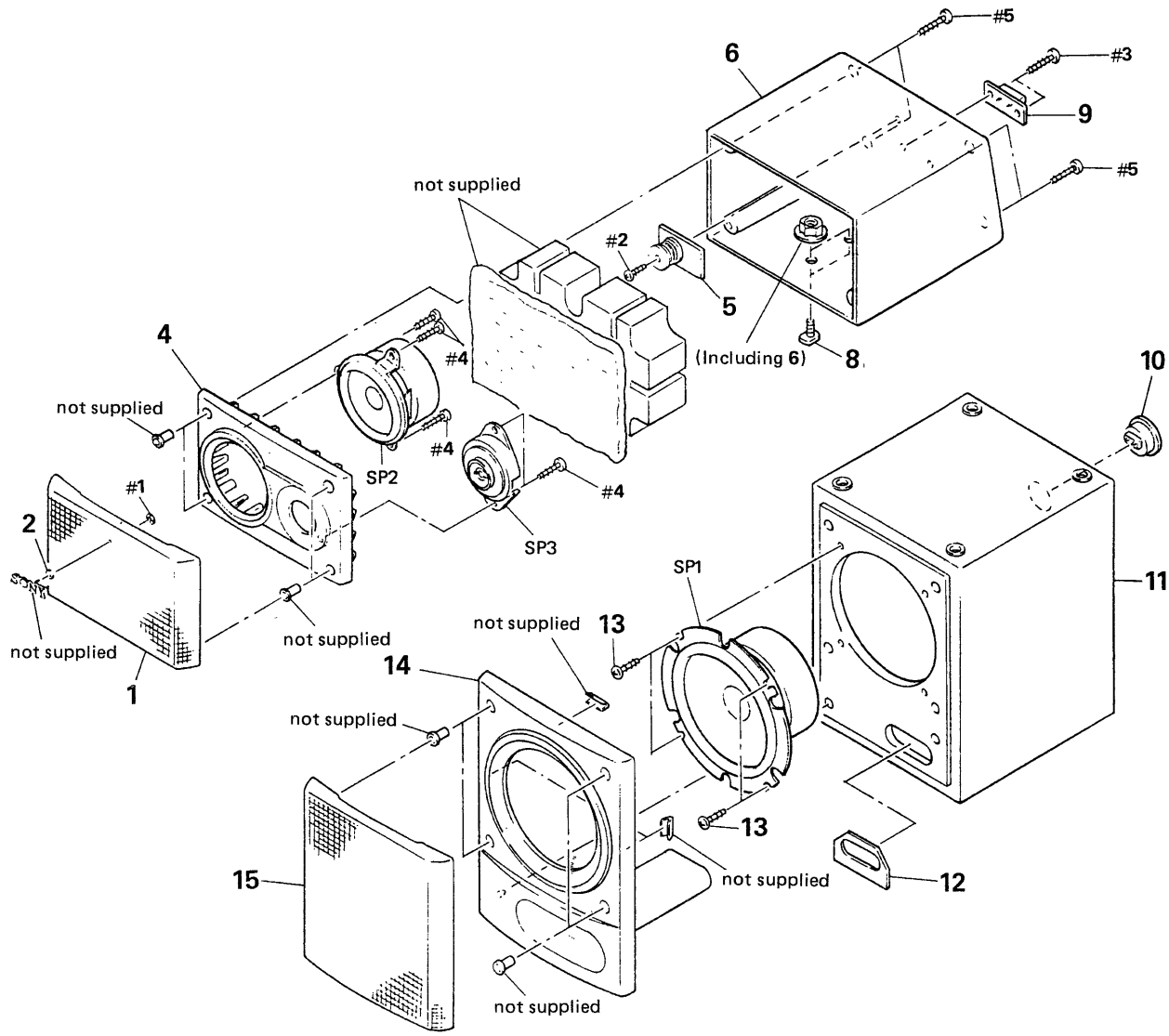
SPEAKER SYSTEM

SONY®

3. EXPLODED VIEW AND PARTS LIST

NOTE:

- –XX, –X mean standardized parts, so they may have some differences from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.



Ref.No.	Part.No.	Description	Remarks
1	X-4942-200-1	FRAME (S) ASSY, GRILLE	
2	3-701-437-21	WASHER	
4	X-4942-201-1	PANEL (S) ASSY, FRONT	
* 5	1-589-388-11	MOUNTED PC BOARD (NETWORK)	
6	X-4942-202-1	CABINET (S) ASSY, SPEAKER	
8	4-928-613-21	NUT, STAND FIXED	
9	1-537-337-31	TERMINAL BOARD (2P·SP)	
10	1-537-332-12	TERMINAL BOARD	
11	X-4942-392-1	CABINET (W) (R) ASSY, SPEAKER (AEP, UK, IT)	
11	X-4942-396-1	CABINET (W) (R) ASSY, SPEAKER (GERMANY)	
11	X-4942-393-1	CABINET (W) (L) ASSY, SPEAKER (AEP, UK, IT)	
11	X-4942-397-1	CABINET (W) (L) ASSY, SPEAKER (GERMANY)	
* 12	4-949-397-01	PACKING (D)	
13	4-874-614-01	SCREW (4) (3.5x14), TAPPING	
14	X-4942-211-2	PANEL (W) (R) ASSY, FRONT	
14	X-4942-215-2	PANEL (W) (L) ASSY, FRONT	
15	X-4942-203-1	FRAME (W) ASSY, GRILLE	

Ref.No.	Part.No.	Description	Remarks
SP1	1-544-724-21	SPEAKER (13cm)	
SP2	1-544-723-11	SPEAKER (8cm)	
SP3	1-544-722-11	SPEKAER (2.5cm)	
		ACCESSORY & PACKING MATERIAL	
	3-694-922-01	SEET, PROTECTION	
	3-755-033-11	MANUAL, INSTRUCTION (ENGLISH, FRANCH, SPANISH, PORTUGUESE, GERMAN, DUTCH, SWEDISH, ITALIAN)	
	4-945-080-01	CUSHION	
	1-590-855-31	CORD, SPEAKER	
		HARDWARE LIST	
		**********	
#1	7-624-200-11	NUT, PUSH 2	
#2	7-685-165-01	SCREW +PTP 4x25 TYPE 1	
#3	7-685-647-19	SCREW +BVTP 3x10 TYPE 2 N-S	
#4	7-685-660-79	SCREW +BVTP 4x10 TYPE 2 IT-3	
#5	7-685-663-79	SCREW +BVTP 4x16 TYPE 2 IT-3	

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